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MARITIME SAFETY COMMITTEE
71st session
Agenda item 23

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**REPORT OF THE MARITIME SAFETY COMMITTEE
ON ITS SEVENTY-FIRST SESSION**

Attached are annexes 1 to 21 to the report of the Maritime Safety Committee on its seventy-first session (MSC 71/23).

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ANNEX 1

AGENDA OF THE SEVENTY-FIRST SESSION AND LIST OF DOCUMENTS

1 Adoption of the agenda, report on credentials

MSC 71/1	Secretariat	Provisional agenda
MSC 71/1/1	Secretariat	Annotations to the provisional agenda

2 Decisions of other IMO bodies

MSC 71/2	Secretariat	Outcome of LEG 79
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3 Consideration and adoption of amendments to mandatory instruments

MSC 71/3	Secretariat	Text of proposed amendments to SOLAS chapter VII and related draft resolution
MSC 71/3/1	Bahamas and Panama	Proposed amendment to SOLAS regulation III/28
MSC 71/3/2	Secretariat	Text of draft INF Code and related draft resolution
MSC 71/3/3	United Kingdom	Proposed draft MSC circular relating to helicopter landing areas
MSC 71/3/4	Cyprus	Comments on, and suggested amendments to, the draft INF Code
MSC 71/WP.11	Drafting group	Draft amendments to SOLAS, draft INF Code and draft MSC circular

4 Bulk carrier safety

MSC 71/4	Secretariat	Outcome of SLF 42
MSC 71/4/1	IACS	Interpretation of SOLAS regulation XII/8.3
MSC 71/4/2	Denmark	Proposed inclusion of heavy break bulk cargoes in SOLAS chapter XII
MSC 71/4/3	Norway	Interpretation of term "bulk carrier of single side skin construction"
MSC 71/4/4	United Kingdom	Information on research undertaken on safety of bulk carriers in extreme seas
MSC 71/INF.7 (E only)	IACS	Summary of Hazards Identification on watertight integrity of the fore end of bulk carriers
MSC 71/WP.3	Working group	Report of the working group

5 Fire protection

MSC 71/5	Secretariat	Report of the 43rd session of the Sub-Committee
FP 43/18	Sub-Committee	Report of the 43rd session

6 Training and watchkeeping

MSC 71/6	Secretariat	Report of the 30th session of the Sub-Committee
STW 30/13	Sub-Committee	Report of the 30th session
MSC 71/6/1	Secretariat	Progress of reports pursuant to STCW regulation I/7
MSC 71/6/1/Add.1	Secretariat	List of competent persons (section A-I/7 of the STCW Code)
MSC 71/6/2	Secretariat/Working group	Report of the 2nd session of the Joint FAO/ILO/IMO Working Group on Fishermen's Training
MSC 71/6/3	Cyprus, Greece and United Kingdom	Draft Assembly resolution on Fraudulent certificates of competency
MSC 71/6/4	Cyprus	Information on fraudulent certificates
MSC 71/INF.3 (E only)	Secretariat/Working group	Revised Document for Guidance on Fishermen's Training
MSC 71/WP.9	Secretariat	List of competent persons
MSC 71/WP.10	Secretariat	Fraudulent certificates

7 Stability, load lines and fishing vessel safety

MSC 71/7	Secretariat	Report of the 42nd session of the Sub-Committee
SLF 42/18	Sub-Committee	Report of the 42nd session
MSC 71/7/1	Australia	Comments on revision of the HSC Code

8 Dangerous goods, solid cargoes and containers

MSC 71/8	Secretariat	Report of the 4th session of the Sub-Committee
DSC 4/14	Sub-Committee	Report of the 4th session
MSC 71/8/1	Cyprus	Comments on amendments to SOLAS for making the IMDG Code mandatory
MSC 71/WP.2	Secretariat	Matters arising from making the IMDG Code mandatory

9 Ship design and equipment

MSC 71/9	Secretariat	Urgent matters emanating from the 42nd session of the Sub-Committee Report of the 42nd session
DE 42/15	Sub-Committee	

10 Flag State implementation

MSC 71/10	Secretariat	Urgent matters emanating from the 7th session of the Sub-Committee Report of the 7th session
FSI 7/14	Sub-Committee	
MSC 71/10/1	FAO	Comments on open registers regarding fishing and fishing vessels
MSC 71/10/2	Vanuatu	Comments on draft revised resolution A.787(19)
MSC 71/10/3	Cyprus	Comments on amendments to resolution A.787(19)
MSC 71/WP.13	Secretariat	Draft Assembly resolution on amendments to the Code for investigation and marine casualties and incidents

11 Bulk liquids and gases

MSC 71/11	Secretariat	Urgent matters emanating from the 4th session of the Sub-Committee Report of the 4th session Revised draft Assembly resolution on Global and uniform implementation of HSSC
BLG 4/18	Sub-Committee	
MSC 71/WP.12	Japan	

12 Technical assistance subprogramme in maritime safety

MSC 71/12	Secretariat	Status of TC projects implemented by MSD in 1998
MSC 71/12/1	Secretariat	Status of model courses

13 Role of the human element

MSC 71/13	United States/ Correspondence group	Report of the intersessional Correspondence Group on Fatigue Occupational exposure to toxic chemicals carried by sea in bulk
MSC 71/13/1	Australia	
MSC 71/INF.8 (E only)	Japan	Results of investigation into near misses
MSC 71/WP.15 and Add.1	Joint MSC/MEPC Working Group on HE and FSA	Report of the working group

	MSC 71/WP.17	Joint MSC/MEPC Working Group on HE and FSA	Draft MSC/MEPC circular on Clarification related to the implementation of the ISM Code
14	Formal safety assessment		
	MSC 71/14	Italy/Correspondence group	Report of the Correspondence Group on Trial Application of FSA to high-speed craft
	MSC 71/14/1	IACS	Guidance on incorporation of human element into the Interim Guidelines for the Application of FSA to the IMO rule-making process
	MSC 71/14/2	Sweden	Comments on the trial application of FSA to high-speed craft
	MSC 71/WP.15 and Add.1	Joint MSC/MEPC Working Group	Report of the working group
15	Piracy and armed robbery against ships		
	MSC 71/15	Secretariat	Annual, quarterly and monthly reports on incidents in 1998
	MSC 71/15/Add.1	Secretariat	Information on action taken by coastal States
	MSC 71/15/1	Secretariat	Information on implementation of the anti-piracy project
	MSC 71/15/2	Secretariat	Report on the mission of experts to South East Asia (October 1998)
	MSC 71/15/3	Secretariat	Report on the mission of experts to Brazil and on a regional seminar and workshop (Brasilia, October 1998)
	MSC 71/15/4	Secretariat	Report on a regional seminar and workshop (Singapore, February 1999)
	MSC 71/15/5	ICC/IMB	Information on serious incidents
	MSC 71/15/6	Venezuela	Information on the m.v. Sea Explorer II incident (MSC/Circ.880)
	MSC 71/WP.6	Drafting group	Report of the drafting group
16	Implementation of instruments and related matters		
	MSC 71/16	Secretariat	Information on the status of IMO safety-related instruments
	MSC 71/16/1	Secretariat	Documents deferred from MSC 70
	MSC 71/16/2	IACS	Comments on draft Guidelines on methods for making reference to IMO instruments in IMO Conventions, etc.
	MSC 71/16/3	Secretariat	Revised draft text of the Guidelines on methods for making reference to IMO instruments in IMO Conventions, etc.

MSC 71/16/4	Cyprus	Comments on document MSC 70/16/1
MSC 71/INF.4 (E only)	Secretariat	Status of IMO safety-related instruments
MSC 70/16	Secretariat	<i>Information on the status of IMO Conventions</i>
MSC 70/16/1	Secretariat	<i>Revised text of the draft Guidelines on methods for making reference to IMO instruments in IMO Conventions and other mandatory instruments</i>
MSC 70/16/2	Republic of Korea	<i>Adjustment of wording for referencing IMO instruments</i>
MSC 70/16/3	China	<i>Comments on uniform wording for referencing IMO instruments</i>
MSC 70/INF.9 (E only)	Secretariat	<i>Lists on implementation of IMO Conventions (referred to in document MSC 70/16)</i>
MSC 70/INF.25 (E only)	China	<i>List of performance standards and technical specifications referred to in footnotes to SOLAS and MARPOL provisions</i>
MSC 71/WP.16	Secretariat	Draft Assembly resolution on Procedure for adoption of, and amendments to, performance standards and technical specifications
17	Unsafe practices associated with the trafficking or transport of migrants by sea	
MSC 71/17	Secretariat	Report of the outcome of the First Meeting of the Ad Hoc Committee on the Elaboration of a Convention against Transnational Organized Crime (Vienna, January 1999)
MSC 71/17/1	Secretariat	Draft progress report on the issue of combating unsafe practices associated with the trafficking or transport of migrants at sea
18	Relations with other organizations	
	No documents submitted	
19	Application of the Committee's Guidelines	
MSC 71/19	Norway	Comments and proposals on document MSC 70/19
MSC 71/19/1	Cyprus	Comments and proposals on document MSC 70/19
MSC 71/WP.8	Secretariat	Proposed amendments to the Guidelines

20 Work programme

MSC 71/20	Secretariat	Work programmes of the FP, COMSAR, NAV, SLF and STW Sub-Committees
MSC 71/20/Add.1	Secretariat	Work programmes of the DSC, FSI and DE Sub-Committees
MSC 71/20/Add.2	Secretariat	Work programme of the BLG Sub-Committee
MSC 71/20/1	Secretariat	Documents deferred from MSC 70
MSC 71/20/2	Secretariat	Proposed long-term work plan (up to 2006)
MSC 71/20/3	United Kingdom	Proposal to take account of bunker fuel in ships' routing measures
MSC 71/20/4	United Kingdom	Proposal to consider the development of performance standards for bridge watch alarms
MSC 71/20/5	United States	Proposed improvements to fire detection and fire alarm systems on passenger ships
MSC 71/20/6	Russian Federation	Comments on document MSC 70/20/7 on "designated" rescue boats
MSC 71/20/7	Australia	Comments on safety matters involving lifeboat maintenance, inspection and drills
MSC 71/20/8	IEC	Information on IEC publication 60092-502 on Electrical installations in tankers
MSC 71/20/9	Japan	Supplementary information to document MSC 70/20/6 on Interim standards for ship manoeuvrability (resolution A.751(18))
MSC 71/20/10	IEC	Proposal on the revision of the performance standards for SDME
MSC 71/20/11	United States	Proposed revised instructions on guidelines for ships operating in polar waters
MSC 71/20/12	Spain	Proposals on new watch alarm systems and optimization of ship-to-shore communications
MSC 71/20/13	Germany	Proposals on resolution MSC.81(70) on testing of life-saving appliances
MSC 71/20/14	Norway	Proposal on improvement of thermal protection
MSC 71/20/15	ICCL	Comments on document MSC 71/20/5 on fire alarm systems on passenger ships
MSC 71/INF.2 (E only)	United States	Marine Accident Report on fire aboard the "Universe Explorer"

<i>MSC 70/20/2</i>	<i>Germany</i>	<i>Results of a trial application of an FSA study on disabled oil tankers and proposal for a new item in the DE Sub-Committee work programme</i>
<i>MSC 70/20/3</i>	<i>Ireland</i>	<i>Proposal to develop guidelines for GMDSS installations on board SOLAS ships</i>
<i>MSC 70/20/4</i>	<i>Finland, Denmark, Norway and Sweden</i>	<i>Comments on work on harmonization of damage stability provisions in IMO instruments</i>
<i>MSC 70/20/5</i>	<i>Japan</i>	<i>Proposal for inclusion of desalinators as normal equipment on lifeboats and liferafts</i>
<i>MSC 70/20/6</i>	<i>Japan</i>	<i>Proposal for revision of the Interim Standards for ship manoeuvrability (resolution A.751(18))</i>
<i>MSC 70/20/7</i>	<i>United Kingdom</i>	<i>Proposal for designated rescue boats to be made a requirement for all new and existing ships</i>
<i>MSC 70/20/8</i>	<i>India</i>	<i>Proposed amendments to SOLAS requirements on survey and certification</i>
<i>MSC 70/20/9</i>	<i>United Kingdom</i>	<i>Comments on the amendments to SOLAS to make the IMDG Code mandatory</i>
<i>MSC 70/20/10</i>	<i>United Kingdom and IACS</i>	<i>Proposal for re-definition of "new ship" in SOLAS 74 for application to future new ships</i>
<i>MSC 70/20/11</i>	<i>IALA</i>	<i>Information on action taken on standards for training and certification of VTS personnel</i>
<i>MSC 70/20/12</i>	<i>Spain</i>	<i>Proposals for a new watch alarm system and optimization of coastal ship-to-shore communications</i>
<i>MSC 70/20/13</i>	<i>ICFTU</i>	<i>Comments on document MSC 70/20/5</i>
<i>MSC 70/INF.26 (E only)</i>	<i>Netherlands</i>	<i>Information on a research project on designated rescue boats</i>
<i>MSC 70/WP.4</i>	<i>Chairman</i>	<i>Preliminary assessment of proposals for new work programme items</i>
<i>MSC 71/WP.1</i>	<i>Chairman</i>	<i>Preliminary assessment of proposals for new work programme items</i>
<i>MSC 71/WP.4</i>	<i>Secretariat</i>	<i>Substantive items for inclusion in the agendas for MSC 72 and MSC 73</i>
<i>MSC 71/WP.7</i>	<i>Secretariat</i>	<i>Work programmes of the sub-committees and provisional agendas for their forthcoming sessions</i>

21 Election of Chairman and Vice-Chairman

No documents

22 Any other business

MSC 71/22	Secretariat	Background information on the preparation of a new report on safety and environmental protection and review of IMO Rules and Recommendations on Navigation through the Strait of Istanbul, Strait of Çannakale and the Marmara Sea
MSC 71/22/1	Secretariat	Items deferred from MSC 70
MSC 71/22/2	Secretariat	Report on progress in IACS Quality System Certification Scheme
MSC 71/22/3	Secretariat	Report on outcome of the 1998 Fremantle SAR/GMDSS Conference
MSC 71/22/4	Secretariat	Draft Assembly resolution on the IAMSAR Manual
MSC 71/22/5	Denmark	Comments on radiocommunications in A1 and A2 areas with no VHF/MF services
MSC 71/22/6	IALA	Proposal to revise MSC/Circ.586
MSC 71/22/7	Canada	Information on shipboard environmental contamination caused by mercury from ship control systems
MSC 71/22/8	IFSMA, IAIN and IMPA	Comments on navigation and safety in the Strait of Istanbul, Strait of Çanakkale and the Marmara Sea
MSC 71/22/9	Turkey	Comments on document MSC 71/22/8
MSC 71/INF.5 (E only)	United States	Results of a meeting on the Y2K issue
MSC 71/INF.6 (E only)	Inmarsat	Statement on Y2K
MSC/71/INF.9 (E only)	United States	Information on a stability analysis of the m.v. Monarch of the Seas following grounding
MSC 71/INF.10 (E only)	Turkey	Information on marine biodiversity in the Turkish Straits
MSC 71/INF.11 (E only)	Turkey	Information on ecological characteristics and problems in the Turkish Straits
MSC 70/22	Secretariat	<i>Information on IMO/IACS co-operation in the Quality System Certification Scheme and its QSCS Advisory Committee</i>
MSC 70/22/1	ILAMA	<i>Proposed amendment to MSC/Circ.809</i>
MSC 70/22/2	Australia	<i>Proposed MSC circular to reflect amendments to chapter III of SOLAS in references in the Cargo Ship Safety Equipment Certificate and Record of Equipment</i>

<i>MSC 70/INF.5 (E only)</i>	<i>United Kingdom</i>	<i>Information on registration of research and development projects (ongoing research)</i>
<i>MSC 70/INF.6 (E only)</i>	<i>United Kingdom</i>	<i>Information on registration of research and development projects (completed research)</i>
<i>MSC 70/INF.10/Rev.1 (E only)</i>	<i>European Commission</i>	<i>Information on the development of an augmentation service for the current GNSS (EGNOS)</i>
<i>MSC 70/INF.11 (E only)</i>	<i>Singapore</i>	<i>Information on the 9th International Symposium on VTS (VTS 2000)</i>
<i>MSC 70/INF.13 (E only)</i>	<i>INTERTANKO</i>	<i>INTERTANKO discussion paper on "Systematic Approaches to Tanker Accident Analysis - Lessons Learnt"</i>
<i>MSC 70/INF.18 (E only)</i>	<i>ICS and OCIMF</i>	<i>ICS/OCIMF publication "Peril at Sea and Salvage - A Guide for Masters, 5th Edition"</i>
<i>MSC 70/INF.23 (E only)</i>	<i>IACS</i>	<i>Information on application of IACS Unified Interpretation SC 140 "Secondary means of venting cargo tanks"</i>
<i>MSC 71/WP.5</i>	<i>Working group</i>	<i>Report of the working group</i>

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<i>MSC 71/WP.14 and Adds.1, 2, 2/Corr.1 and 3</i>	<i>Secretariat</i>	<i>Draft report</i>
<i>MSC 71/23 and Add.1</i>	<i>Secretariat</i>	<i>Report</i>

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<i>MSC 71/INF.1</i>	<i>List of Participants</i>
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ANNEX 2

**PROPOSED AMENDMENTS TO SOLAS REGULATION III/28.2
RELATING TO HELICOPTER LANDING AREAS**

CHAPTER III

LIFE-SAVING APPLIANCES AND ARRANGEMENTS

Regulation 28 - Helicopter landing and pick-up areas

In paragraph 2 of the regulation the words "Passenger ships" are replaced by the words "Ro-ro passenger ships".

ANNEX 3

RESOLUTION MSC.87(71)
(adopted on 27 May 1999)

**ADOPTION OF AMENDMENTS TO THE INTERNATIONAL CONVENTION
FOR THE SAFETY OF LIFE AT SEA, 1974, AS AMENDED**

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING FURTHER article VIII(b) of the International Convention for the Safety of Life at Sea (SOLAS), 1974, hereinafter referred to as "the Convention", concerning the procedures for amending the Annex to the Convention, other than the provisions of chapter I thereof,

RECOGNIZING the need for the mandatory application of an agreed international standard for the carriage of INF cargo by sea,

HAVING CONSIDERED, at its seventy-first session, amendments to the Convention proposed and circulated in accordance with article VIII(b)(i) thereof,

1. ADOPTS, in accordance with article VIII(b)(iv) of the Convention, amendments to the Convention the text of which is set out in the Annex to the present resolution;
2. DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the amendments shall be deemed to have been accepted on 1 July 2000, unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet, have notified their objections to the amendments;
3. INVITES Contracting Governments to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 January 2001 upon their acceptance in accordance with paragraph 2 above;
4. REQUESTS the Secretary-General, in conformity with article VIII(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the Annex to all Contracting Governments to the Convention;
5. FURTHER REQUESTS the Secretary-General to transmit copies of this resolution and its Annex to Members of the Organization, which are not Contracting Governments to the Convention.

ANNEX

**AMENDMENTS TO THE INTERNATIONAL CONVENTION
FOR THE SAFETY OF LIFE AT SEA, 1974, AS AMENDED**

**CHAPTER VII
CARRIAGE OF DANGEROUS GOODS**

PART A

- 1 The following sentence is added at the end of existing paragraph 3 of regulation 1:

"In addition, the requirements of part D shall apply to the carriage of INF cargo as defined in regulation 14.2".

- 2 The following new part D is added after existing part C:

"PART D

**SPECIAL REQUIREMENTS FOR THE CARRIAGE OF PACKAGED IRRADIATED
NUCLEAR FUEL, PLUTONIUM AND HIGH-LEVEL RADIOACTIVE WASTES ON
BOARD SHIPS**

Regulation 14

Definitions

For the purpose of this part, unless expressly provided otherwise:

- 1 *INF Code* means the International Code for the Safe Carriage of Packaged Irradiated Nuclear Fuel, Plutonium and High-Level Radioactive Wastes on Board Ships, adopted by the Maritime Safety Committee of the Organization by resolution MSC.88(71), as may be amended by the Organization, provided that such amendments are adopted, brought into force and take effect in accordance with the provisions of article VIII of the present Convention concerning the amendment procedures applicable to the annex other than chapter I.
- 2 *INF cargo* means packaged irradiated nuclear fuel, plutonium and high-level radioactive wastes carried as cargo in accordance with Class 7 of the IMDG Code, schedule 10, 11, 12 or 13.
- 3 *Irradiated nuclear fuel* means material containing uranium, thorium and/or plutonium isotopes which has been used to maintain a self-sustaining nuclear chain reaction.
- 4 *Plutonium* means the resultant mixture of isotopes of that material extracted from irradiated nuclear fuel from reprocessing.

5 *High-level radioactive wastes* means liquid wastes resulting from the operation of the first stage extraction system or the concentrated wastes from subsequent extraction stages, in a facility for reprocessing irradiated nuclear fuel, or solids into which such liquid wastes have been converted.

6 *IMDG Code* means the International Maritime Dangerous Goods Code adopted by the Assembly of the Organization by resolution A.716(17), as amended and may be amended by the Maritime Safety Committee.

Regulation 15

Application to ships carrying INF cargo

1 Except as provided for in paragraph 2, this part shall apply to all ships regardless of the date of construction and size, including cargo ships of less than 500 gross tonnage, engaged in the carriage of INF cargo.

2 This part and the INF Code do not apply to warships, naval auxiliary or other vessels owned or operated by a Contracting Government and used, for the time being, only on government non-commercial service; however, each Administration shall ensure, by the adoption of appropriate measures not impairing operations or operational capabilities of such ships owned or operated by it, that such ships carrying INF cargo act in a manner consistent, so far as reasonable and practicable, with this part and the INF Code.

3 Nothing in this part or the INF Code shall prejudice the rights and duties of governments under international law and any action taken to enforce compliance shall be consistent with international law.

Regulation 16

Requirements for ships carrying INF cargo

1 A ship carrying INF cargo shall comply with the requirements of the INF Code in addition to any other applicable requirements of the present regulations and shall be surveyed and certified as provided for in that Code.

2 A ship holding a certificate issued pursuant to the provisions of paragraph 1 shall be subject to the control established in regulations I/19 and XI/4. For this purpose, such certificate shall be treated as a certificate issued under regulation I/12 or I/13."

ANNEX 4

**RESOLUTION MSC.88(71)
(adopted on 27 May 1999)**

**ADOPTION OF THE INTERNATIONAL CODE FOR THE SAFE CARRIAGE OF
PACKAGED IRRADIATED NUCLEAR FUEL, PLUTONIUM AND HIGH-LEVEL
RADIOACTIVE WASTES ON BOARD SHIPS (INF CODE)**

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

NOTING the adoption by the Assembly of resolutions:

- A.748(18) on the Code for the Safe Carriage of Irradiated Nuclear Fuel, Plutonium and High-Level Radioactive Wastes in Flasks on Board Ships (INF Code);
- A.790(19) on the Review of the INF Code;
- A.853(20) on Amendments to the INF Code; and
- A.854(20) on Guidelines for developing shipboard emergency plans for ships carrying materials subject to the INF Code,

RECOGNIZING the need to provide a mandatory application of the agreed international standards for the carriage of INF cargo by sea,

NOTING ALSO resolution MSC.87(71) by which it adopted amendments to chapter VII of the International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended, to make the provisions of the INF Code mandatory under that Convention on or after 1 January 2001,

HAVING CONSIDERED, at its seventy-first session, the text of the proposed INF Code,

1. ADOPTS the International Code for the Safe Carriage of Packaged Irradiated Nuclear Fuel, Plutonium and High-Level Radioactive Wastes on Board Ships (INF Code), the text of which is set out in the Annex to the present resolution;
2. NOTES that under the amendments to chapter VII of the 1974 SOLAS Convention, amendments to the INF Code shall be adopted, brought into force and shall take effect in accordance with the provisions of article VIII of that Convention concerning the amendment procedure applicable to the Annex to the Convention other than chapter I;
3. REQUESTS the Secretary-General to transmit certified copies of the present resolution and the text of the INF Code, contained in the Annex, to all Contracting Governments to the Convention;
4. FURTHER REQUESTS the Secretary-General to transmit copies of this resolution and its Annex to Members of the Organization, which are not Contracting Governments to the Convention.

ANNEX

INTERNATIONAL CODE FOR THE SAFE CARRIAGE OF PACKAGED IRRADIATED NUCLEAR FUEL, PLUTONIUM AND HIGH-LEVEL RADIOACTIVE WASTES ON BOARD SHIPS (INF CODE)

Chapter 1 - General

1.1 Definitions

1.1.1 For the purpose of this Code:

- .1 *Administration* means the Government of the State whose flag the ship is entitled to fly.
- .2 *Convention* means the International Convention for the Safety of Life at Sea, 1974, as amended.
- .3 *INF cargo* means packaged irradiated nuclear fuel, plutonium and high-level radioactive wastes carried as cargo in accordance with Class 7 of the IMDG Code, schedule 10, 11, 12 or 13.
- .4 *Irradiated nuclear fuel* means material containing uranium, thorium and/or plutonium isotopes which has been used to maintain a self-sustaining nuclear chain reaction.
- .5 *Plutonium* means the resultant mixture of isotopes of that material extracted from irradiated nuclear fuel from reprocessing.
- .6 *High-level radioactive wastes* means liquid wastes resulting from the operation of the first stage extraction system or the concentrated wastes from subsequent extraction stage, in a facility for reprocessing irradiated nuclear fuel, or solids into which such liquid wastes have been converted.
- .7 *IMDG Code* means the International Maritime Dangerous Goods Code defined in regulation VII/14.6 of the Convention.
- .8 *IBC Code* means the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk, as defined in regulation VII/8.1 of the Convention.
- .9 *Incident* means any occurrence or series of occurrences, including loss of container integrity, having the same origin which results or may result in a release, or probable cargo release of INF cargo.
- .10 *Release* means the escape of INF cargo from its containment system or the loss of an INF cargo package.

1.1.2 For the purpose of this Code, ships carrying INF cargo are assigned to the following three classes, depending on the total activity of INF cargo which is carried on board:

Class INF 1 ship - Ships which are certified to carry INF cargo with an aggregate activity less than 4,000 TBq.

Class INF 2 ship - Ships which are certified to carry irradiated nuclear fuel or high-level radioactive wastes with an aggregate activity less than 2×10^6 TBq and ships which are certified to carry plutonium with an aggregate activity less than 2×10^5 TBq.

Class INF 3 ship - Ships which are certified to carry irradiated nuclear fuel or high-level radioactive wastes and ships which are certified to carry plutonium with no restriction of the maximum aggregate activity of the materials.

1.2 Application

1.2.1 This Code applies to ships engaged in the carriage of INF cargo as prescribed in regulation VII/15 of the Convention.

1.2.2 In addition to the requirements of this Code, the provisions of the IMDG Code should apply to the carriage of INF cargo.

1.2.3 INF cargo that would be required to be carried on Class INF 3 ships shall not be allowed on passenger ships.

1.3 Survey and certification

1.3.1 Before the carriage of INF cargo takes place, a ship intended to carry INF cargo shall be subject to an initial survey which shall include a complete examination of its structure, equipment, fittings, arrangements and material in so far as the ship is covered by this Code.

1.3.2 The Administration, or an organization recognized by it in accordance with regulation I/6 of the Convention shall, after the initial survey as required in 1.3.1, issue the ship with the International Certificate of Fitness for the Carriage of INF Cargo, the form of which is set out in the appendix.

1.3.3 A ship certified for the carriage of INF cargo shall be subject to inspections and surveys under the applicable provisions of chapter I of the Convention in order to ensure that the structure, equipment, fittings, arrangements and material comply with the provisions of this Code.

1.3.4 The International Certificate of Fitness for the Carriage of INF Cargo shall cease to be valid if the survey required by 1.3.3 has not been carried out or has shown that the ship does not comply with the provisions of this Code, or when a certificate of that ship required by the Convention has expired.

Chapter 2 - Damage stability

- 2.1 The damage stability of a Class INF 1 ship shall be to the satisfaction of the Administration.
- 2.2 A Class INF 2 ship shall:
- .1 if it is built to the standards for a passenger ship, comply with the damage stability requirements of part B of chapter II-1 of the Convention; or
 - .2 if it is built to the standards for a cargo ship, comply with the damage stability requirements of part B-1 of chapter II-1 of the Convention, regardless of the length of the ship.
- 2.3 A Class INF 3 ship shall comply with:
- .1 the damage stability requirements for type 1 ship survival capability and location of cargo spaces in chapter 2 of the IBC Code; or
 - .2 regardless of the length of the ship, the damage stability requirements in part B-1 of chapter II-1 of the Convention, using the subdivision index R_{INF} as given below:

$$R_{INF} = R + 0.2(1 - R)$$

Chapter 3 - Fire safety measures

- 3.1 Fire safety measures of a Class INF 1 ship shall be to the satisfaction of the Administration.
- 3.2 Class INF 2 and 3 ships, regardless of their size, shall be fitted with the following systems and equipment:
- .1 a water fire-extinguishing system complying with the requirements of regulation II-2/4 of the Convention;
 - .2 fixed fire-extinguishing arrangements in machinery spaces of category A, as defined in regulation II-2/3.19 of the Convention, complying with the requirements of regulation II-2/7 of the Convention;
 - .3 fixed cargo space cooling arrangements, complying with the requirements of regulation II-2/54.2.1.3 of the Convention; and
 - .4 a fixed fire-detection and fire alarm system, protecting the machinery spaces, accommodation and service spaces, complying with the requirements of regulation II-2/13 of the Convention.
- 3.3 In a Class INF 3 ship, accommodation spaces, service spaces, control stations and machinery spaces of category A shall be fitted either forward or aft of the cargo spaces, due regard being paid to the overall safety of the ship.

Chapter 4 - Temperature control of cargo spaces

4.1 In Class INF 1, 2 and 3 ships:

- .1 adequate ventilation or refrigeration of enclosed cargo spaces shall be provided so that the average ambient temperature within such spaces does not exceed 55°C at any time;
- .2 ventilation or refrigeration systems serving cargo spaces intended for the transport of INF cargo shall be independent of those serving other spaces; and
- .3 those items essential to operation, such as fans, compressors, heat exchangers, cooling water supply, shall be provided in duplicate for each cargo space and spare parts shall be available, to the satisfaction of the Administration.

Chapter 5 - Structural consideration

The structural strength of deck areas and support arrangements shall be sufficient to withstand the load which is to be sustained.

Chapter 6 - Cargo securing arrangements

6.1 Adequate permanent securing devices shall be provided to prevent movement of the packages within the cargo spaces. In designing permanent devices, due consideration shall be given to the orientation of the packages and the following ship acceleration levels shall be taken into account:

- 1.5 g longitudinally;
- 1.5 g transversely;
- 1.0 g vertically up;
- 2.0 g vertically down.

6.2 Alternatively, where packages are carried on the open deck or a vehicle deck, they shall be secured in accordance with the principles of safe stowage and securing of heavy unitized and wheel-based (rolling) cargo approved by the Administration based on the guidelines developed by the Organization¹.

6.3 Collision chocks, where used, shall be so arranged that they will not interfere or prevent cooling air flow which may be necessary under the provisions of 4.1.

¹ Refer to:

- .1 the Code for the Safe Practice for Cargo Stowage and Securing, adopted by the Organization by resolution A.714(17);
- .2 the Guidelines for Securing Arrangements for the Transport of Road Vehicles on Ro-Ro Ships, adopted by the Organization by resolution A.581(14); and
- .3 MSC/Circ.745 on the Guidelines for the preparation of the Cargo Securing Manual.

Chapter 7 - Electrical power supplies

7.1 The electrical power supplies in a Class INF 1 ship shall be to the satisfaction of the Administration.

7.2 In Class INF 2 and 3 ships:

- .1 an alternative source of electrical power, complying with the requirements of the international standards acceptable to the Organization², shall be provided so that damage involving the main supply would not affect the alternative source; and
- .2 the power available from the alternative source shall be sufficient to supply the following services for at least 36 h:
 - .2.1 the equipment provided for the flooding and cooling arrangements referred to in 3.2.3 and 4.1; and
 - .2.2 all emergency services required by the Convention.

7.3 In a Class INF 3 ship, the alternative source referred to in 7.2.1 shall be located outside the extent of any damage envisaged under chapter 2.

Chapter 8 - Radiological protection

Depending upon the characteristics of the INF cargo to be carried and upon the design of the ship, additional arrangements or equipment for radiological protection shall, if necessary, be provided to the satisfaction of the Administration.

Chapter 9 - Management and training

Management and training for a ship carrying INF cargo shall be to the satisfaction of the Administration taking into account developments in the Organization.

Chapter 10 - Shipboard emergency plan

10.1 Every ship carrying INF cargo shall carry on board a shipboard emergency plan.

² Refer to the recommendations published by the International Electrotechnical Commission and, in particular, to Publication 92 - Electrical Installations in Ships.

10.2 Such a plan shall be approved by the Administration based on the guidelines developed by the Organization³ and written in a working language or languages understood by the master and officers. As a minimum, the plan shall consist of:

- .1 the procedure to be followed by the master or other persons having charge of the ship to report an incident involving INF cargo, as required by chapter 11 of this Code;
- .2 the list of authorities or persons to be contacted in the event of an incident involving INF cargo;
- .3 a detailed description of the action to be taken immediately by persons on board to prevent, reduce or control the release, and mitigate the consequences of the loss, of INF cargo following the incident; and
- .4 the procedures and points of contact on the ship for co-ordinating shipboard action with national and local authorities.

10.3 If a ship is required to have a shipboard emergency plan by other international instruments, the various plans may be combined into a single plan entitled "Shipboard Marine Emergency Plan"⁴.

Chapter 11 - Notification in the event of an incident involving INF cargo

11.1 The reporting requirements of regulation VII/7-1 of the Convention shall apply both to the loss or likely loss of INF cargo overboard and to any incident involving a release or probable release of INF cargo, whatever the reason for such loss or release, including for the purpose of securing the safety of the ship or saving life at sea.

11.2 Such a report shall also be made in the event of damage, failure or breakdown of a ship carrying INF cargo which:

- .1 affects the safety of the ship, including but not limited to, collision, grounding, fire, explosion, structural failure, flooding and cargo shifting; or
- .2 results in the impairment of the safety of navigation, including the failure or breakdown of steering gear, propulsion system, electrical generating system, and essential shipborne navigational aids.

³ Refer to the Guidelines for developing shipboard emergency plans for ships carrying materials subject to the INF Code, adopted by the Organization by resolution A.854(20).

⁴ Refer to the Guidelines for a structure of an integrated system of contingency planning for shipboard emergencies, adopted by the Organization by resolution A.852(20).

APPENDIX

Form of International Certificate of Fitness for the Carriage of INF Cargo⁵

INTERNATIONAL CERTIFICATE OF FITNESS FOR THE CARRIAGE OF INF CARGO

(Official seal)

issued under the provisions of

THE INTERNATIONAL CODE FOR THE SAFE CARRIAGE OF PACKAGED
IRRADIATED NUCLEAR FUEL, PLUTONIUM AND HIGH-LEVEL
RADIOACTIVE WASTES ON BOARD SHIPS (INF CODE)
(resolution MSC.88(71))

under the authority of the Government of

.....

(full official designation of country)

by.....

*(full designation of the competent person or organization
recognized by the Administration)*

Particulars of ship⁶

Name of ship

Distinctive number or letters

Port of registry

Gross tonnage

IMO number

INF class of ship (1.1.2 of the Code)

⁵ The certificate must be drawn up in the official language of the issuing country. If the language used is neither English, French nor Spanish, the text should include a translation into one of these languages.

⁶ Alternatively, the particulars of the ship may be placed horizontally in boxes.

THIS IS TO CERTIFY:

- 1 that the ship has been surveyed in accordance with the provisions of 1.3.1 of the Code; and
- 2 that the survey showed that the structure, equipment, fittings, arrangements and material of the ship complied with the applicable provisions of the Code.

This certificate is issued subject to the provisions of 1.3.4 of the Code.

Issued at
(*place of issue of Certificate*) (date)

The undersigned declares that he is duly authorized by the said Government to issue this Certificate.

.....
(signature of official issuing the Certificate
and/or seal of issuing authority)

ANNEX 5

PROPOSED AMENDMENTS TO THE 1988 SOLAS PROTOCOL

In the form of the Cargo Ship Safety Construction Certificate, Cargo Ship Safety Equipment Certificate and Cargo Ship Safety Certificate given in the appendix to the Annex to the Protocol of 1988 relating to the International Convention for the Safety of Life at Sea, 1974, under the heading "Type of ship", the words "Bulk carrier" are inserted between the heading and "Oil tanker".

ANNEX 6

RESOLUTION MSC.89(71)
(adopted on 28 May 1999)**INTERPRETATION OF THE PROVISIONS OF SOLAS CHAPTER XII ON
ADDITIONAL SAFETY MEASURES FOR BULK CARRIERS**

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

NOTING that the 1997 SOLAS Conference adopted chapter XII of the International Convention for the Safety of Life at Sea (SOLAS), 1974 concerning additional safety measures for bulk carriers,

NOTING FURTHER that SOLAS chapter XII will enter into force on 1 July 1999,

DESIRING to ensure that all Contracting Governments to the 1974 SOLAS Convention implement SOLAS chapter XII in a consistent and uniform manner,

RECOGNIZING, therefore, the need to establish, for that purpose, guidance on applications of, and the interpretation to, the relevant provisions of that chapter, further to that already adopted by resolution MSC.79(70)),

RESPONDING to the request of the 1997 SOLAS Conference, as recorded in Conference resolution 8 thereof, regarding the term "bulk carrier of single side skin construction",

REALIZING that SOLAS regulation XII/8.3, if applied literally, would require every bulk carrier of 150 m in length and upwards of single side skin construction, carrying solid bulk cargoes having a density of 1,780 kg/m³ and above constructed before 1 July 1999, to be permanently marked on the side shell with a solid triangle, and recognizing that this is clearly not the intention of the regulation,

1. URGES Governments concerned to:
 - .1 interpret the term "bulk carrier of single side skin construction" defined in regulation XII/1.2 as indicated in Annex 1 to the present resolution; and
 - .2 interpret the requirement for certain bulk carriers to be permanently marked on the side shell with a triangle, provided in SOLAS regulation XII/8.3, as indicated in Annex 2 to the present resolution; and
2. INVITES Governments concerned to bring the contents of this resolution to the attention of all parties concerned.

ANNEX 1

**INTERPRETATION OF THE TERM
"BULK CARRIER OF SINGLE SIDE SKIN CONSTRUCTION"**

1 "Bulk carrier of single side skin construction" means a bulk carrier where one or more cargo holds are bound by the side shell only or by two watertight boundaries, one of which is the side shell, which are less than 760 mm apart in bulk carriers constructed before 1 January 2000 and less than 1,000 mm apart in bulk carriers constructed on or after 1 January 2000. The distance between the watertight boundaries is to be measured perpendicular to the side shell.

2 The above interpretation should be applied as follows:

- .1 in bulk carriers with single side skin construction in the foremost cargo hold, constructed before 1 July 1999, regulations XII/4.2 and 6 should be applied in accordance with the implementation schedule required by regulation XII/3; and
- .2 in bulk carriers constructed on or after 1 July 1999, the requirements for damage stability under regulation XII/4.1 and structural integrity under regulation XII/5 should be complied with in respect of cargo holds with single side skin construction.

ANNEX 2

**INTERPRETATION OF THE REQUIREMENT FOR CERTAIN
BULK CARRIERS TO BE PERMANENTLY MARKED
ON THE SIDE SHELL WITH A TRIANGLE**

SOLAS regulation XII/8.3 requires a triangle to be marked on the side shell of the ship when compliance with regulation XII/6.2 involves imposition of loading/operating restrictions as described in regulation XII/6.3. Such operating restrictions only need to be imposed for solid bulk cargoes having a density of 1,780 kg/m³ and above, and apply at all times when solid bulk cargoes having a density of 1,780 kg/m³ and above are carried. The following interpretations should be followed when determining if triangle marks are required:

- 1 When a ship's loading booklet restricts the ship to carry solid bulk cargoes having a density of less than 1,780 kg/m³, a triangle mark is not required, provided that all reference to carriage of solid bulk cargoes having a density of 1,780 kg/m³ and above are removed from the loading booklet. The loading booklet is to clearly specify that the ship is prohibited from carrying solid bulk cargoes having a density of 1,780 kg/m³ and above.
- 2 When a ship's deadweight is restricted, but the load line assignment permits deeper draughts, and operating restrictions in the form of draught or deadweight limits are imposed on the ship to obtain compliance with the requirements, the loading booklet is to clearly specify the operating restrictions and a triangle is to be permanently marked on the ship's sides. If the ship's load line and loading booklet are revised to limit the ship's draught at all times, operating restrictions and the triangle marks are not required.
- 3 Where restrictions, other than a general restriction to homogeneous loading, are imposed on the distribution of cargo in the two foremost cargo holds as a condition of compliance, then the loading booklet is to clearly specify the applicable operating restrictions and a triangle is to be permanently marked on the ship's sides.
- 4 Where restrictions are imposed on the maximum mass of packaged cargoes to be carried in the foremost cargo hold as a condition of compliance with the Standards for the evaluation of allowable hold loading of the foremost cargo hold, as contained in annex 2 to 1997 SOLAS Conference resolution 4, the loading booklet is to clearly state these limits, but the triangle marks are not required.
- 5 Where a homogeneous distribution of cargo in the two foremost cargo holds is required as a condition of compliance, then the loading booklet is to clearly specify the applicable operating restrictions and a triangle is to be permanently marked on the ship's sides.

ANNEX 7

**RESOLUTION MSC.90(71)
(adopted on 21 May 1999)**

**ADOPTION OF AMENDMENTS TO THE STANDARD FOR QUALIFYING MARINE
MATERIALS FOR HIGH-SPEED CRAFT AS FIRE-RESTRICTING
MATERIALS (RESOLUTION MSC.40(64))**

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING ALSO that paragraph 7.7.2 of the International Code of Safety for High-Speed Craft (HSC Code) requires the development of standards for fire-restricting materials,

TAKING INTO ACCOUNT the ISO standard 5660 entitled "Fire tests - Reaction to fire - Rate of heat release from building products",

RECOGNIZING that continued work on this subject is necessary with a view to developing corresponding criteria for classification based on the ISO standard 5660,

1. ADOPTS amendments to the Standard for qualifying marine materials for high-speed craft as fire-restricting materials (resolution MSC.40(64)), as set out in the Annex to the present resolution;
2. URGES Member Governments to ensure that, when applying resolution MSC.40(64) in compliance with paragraph 7.7.2 of the HSC Code, the Annex is also taken into account, as appropriate.

ANNEX

AMENDMENTS TO THE STANDARD FOR QUALIFYING MARINE MATERIALS FOR HIGH-SPEED CRAFT AS FIRE-RESTRICTING MATERIALS (RESOLUTION MSC.40(64))

1 *Existing paragraphs 1.3 and 1.4 are replaced by the following:*

“1.3 Surface materials on bulkheads, wall and ceiling linings, including their supporting structure should be tested to the standard ISO 9705 as described in section 2. Bulkhead, wall and ceiling linings should be tested in their end-use configuration, including any surface finish materials.

1.4 Materials used for furniture and other components should be tested to the standard ISO 5660 as described in section 2. (This does not include vertically supported textiles and films, upholstery, or bedding which should be tested in accordance with the Fire Test Procedures Code.)”

2 - TEST PROCEDURE

2 *Existing text of section 2 is replaced by the following:*

"2 Test procedure

2.1 Tests for bulkhead, wall and ceiling linings should be performed according to the standard ISO 9705, the room/corner test. This standard gives alternatives for choice of ignition source and sample mounting technique. For the purpose of testing products to be qualified as “fire-restricting materials”, the following should apply:

- .1 ignition source: Standard ignition source according to annex A of the standard ISO 9705, i.e. 100 kW heat output for 10 min and thereafter 300 kW heat output for another 10 min. Total testing time should be 20 min; and
- .2 specimen mounting: Standard specimen configuration according to annex G of the standard ISO 9705, i.e. the product is mounted both on walls and ceiling of the test room. The product should be tested complying to end use conditions, including any surface finish materials or other surface treatments.

2.2 Tests for materials used for furniture and components other than room linings should be performed according to the standard ISO 5660, the Cone Calorimeter Test. For the purpose of testing products to be qualified as "fire-restricting materials", the following test conditions should apply. Three test specimens should be prepared and tested in accordance with standard ISO 5660-1 (time to ignition and heat release) and the standard ISO 5660-2 (smoke production). The specimen should be representative of the end use conditions of the material, including any surface finishes. A sample edge frame should be used in all tests. Irradiance level should be set at 50 kW/m² for all three tests. The test should be terminated when 20 min have elapsed since the start of exposure. Data should be collected for an additional 2 min after the end of a test to ensure that data are available for the entire test duration after time-shifting to account for delay times of part of the instrumentation.”

4 - CRITERIA FOR QUALIFYING PRODUCTS AS "FIRE-RESTRICTING MATERIALS"

3 Existing text of section 4 is replaced by the following:

"4.1 Surface materials on bulkheads, wall and ceiling linings including their supporting structure are considered to be a "fire-restricting material" if during testing time of 20 min according to the standard ISO 9705 as qualified in paragraph 2.1, the following six criteria are met:

- .1 the time average of heat release rate (HRR) excluding the HRR from the ignition source does not exceed 100 kW;
- .2 the maximum HRR excluding the HRR from the ignition source does not exceed 500 kW averaged over any 30 s period of time during the test;
- .3 the time average of the smoke production rate does not exceed 1.4 m²/s;
- .4 the maximum value of the smoke production rate does not exceed 8.3 m²/s averaged over any period of 60 s during the test;
- .5 flame spread should not reach any further down the walls of the test room than 0.5 m from the floor excluding the area which is within 1.2 m from the corner where the ignition source is located; and
- .6 no flaming drops or debris of the test sample may reach the floor of the test room outside the area which is within 1.2 m from the corner where the ignition source is located.

4.2 Materials used for furniture and other components are considered to be "fire-restricting material" if during testing to the standard ISO 5660 as described in paragraph 2.2, the following four criteria are fulfilled:

- .1 the time to ignition (t_{ig}) is greater than 20 s;
- .2 the maximum 30-second sliding average heat release rate ($HRR_{30,max}$) does not exceed 60 kW/m²;
- .3 the total heat release (THR) does not exceed 20 MJ/m²;
- .4 the time average smoke production rate (SPR_{avg}) does not exceed 0.005 m²/s.

4.3 Materials which qualify as "fire-restricting materials" using the standard ISO 9705 test method described in this annex may be used for furniture or other components if the material closely represents the configuration tested as a room lining in it's actual end use (i.e. similar thickness and surface finish)."

ANNEX 8

PROPOSED AMENDMENTS TO THE INTERNATIONAL CODE FOR APPLICATION OF FIRE TEST PROCEDURES (RESOLUTION MSC.61(67))

9 - LIST OF REFERENCES

- 1 The following references .12 and .13 are added after subparagraph .11:
- “.12 resolution MSC.40(64), as amended – Standard for qualifying marine materials for high-speed craft as fire-restricting materials
- .13 resolution MSC.45(65) – Test procedures for fire-resisting divisions of high-speed craft”

ANNEX 1 - FIRE TEST PROCEDURES

- 2 The following new parts 10 and 11 are added as follows:

“Part 10 – Test for fire-restricting materials for high-speed craft

1 APPLICATION

Where materials used in high-speed craft are required to be fire-restricting, they shall comply with this part.

2 FIRE TEST PROCEDURE

Surface materials on bulkheads, wall and ceiling linings including their supporting structure, furniture, and other structural or interior components required to be fire-restricting materials shall be tested and evaluated in accordance with the fire test procedures specified in resolution MSC.40(64), as amended.

Part 11 – Test for fire-resisting divisions of high-speed craft

1 APPLICATION

Where constructions for use in high-speed craft are required to have fire-resisting properties, they shall comply with this part. Such constructions include fire-resisting bulkheads, decks, ceilings, linings and doors.

2 FIRE TEST PROCEDURE

Fire-resisting divisions of high-speed craft shall be tested and evaluated in accordance with the fire test procedures specified in resolution MSC.45(65).

3 ADDITIONAL REQUIREMENTS

3.1 Materials used in fire-resisting divisions shall be non-combustible or fire-restricting as verified in accordance with part 1 or part 10 of this annex, respectively.

3.2 Part 3 of this annex is also applicable to certain constructions such as windows, fire dampers, pipe penetrations and cable transits.

3.3 Part 4 of this annex is also applicable where a control system of fire doors is required to be able to operate in case of fire.

3.4 Where combustible veneers are allowed to be provided in fire-resisting divisions in conjunction with non-combustible substrates, the low flame spread characteristics of such veneers, if required, shall be verified in accordance with part 5 of this annex.”

ANNEX 2 - PRODUCTS WHICH MAY BE INSTALLED WITHOUT TESTING AND/OR APPROVAL

3 The following new paragraph 2.3 is added to annex 2 after existing paragraph 2.2:

“**2.3** For high-speed craft only, fire-restricting materials are considered to comply with the requirements of part 2 of annex 1 without further testing.”

4 The following new paragraph 5.3 is added to annex 2 after existing paragraph 5.2:

“**5.3** For high-speed craft only, surfaces and materials that are qualified as fire-restricting materials are considered to comply with the requirements of part 5 of annex 1 without further testing.”

ANNEX 9**DRAFT ASSEMBLY RESOLUTION****PRINCIPLES OF SAFE MANNING**

THE ASSEMBLY,

RECALLING Article 15(j) of the Convention on the International Maritime Organization concerning the functions of the Assembly in relation to regulations and guidelines concerning maritime safety and the prevention and control of marine pollution from ships,

RECALLING ALSO Article 28(a) of that Convention which requires the Maritime Safety Committee to consider, *inter alia*, the manning of sea-going ships from a safety standpoint,

NOTING that safe manning is a function of the number of qualified and experienced seafarers necessary for the safety of the ship, crew, passengers, cargo and property and for the protection of the marine environment,

RECOGNIZING the importance of the requirements of the pertinent IMO instruments as well as those adopted by ILO, ITU and WHO on maritime safety and protection of the marine environment,

MINDFUL of the provisions of SOLAS regulation V/13 with respect to the issue of an appropriate safe manning document or equivalent as evidence of minimum safe manning,

BEING AWARE that the ability of seafarers to maintain observance of these requirements is dependent upon their continued efficiency through conditions relating to training, hours of work and rest, occupational safety, health and hygiene and the proper provision of food,

BELIEVING that international acceptance of broad principles as a framework for administrations to determine the safe manning of ships would materially enhance maritime safety and protection of the marine environment.

HAVING CONSIDERED the recommendation made by the Maritime Safety Committee at its seventy-first session,

1. RECOMMENDS that Governments, in establishing the minimum safe manning level for each ship flying their flag, observe the principles set out in annex 1 and take into account the guidelines set out in annex 2 to the present resolution ;
2. URGES Governments to ensure that minimum safe manning documents issued to such ships contain, as a minimum, the information given in annex 3 to the present resolution;
3. URGES FURTHER Governments, when exercising port State control functions under international conventions in force with respect to a foreign ship visiting their ports, to regard compliance with such a document as evidence that the ship is safely manned;
4. REQUESTS the Maritime Safety Committee to keep this resolution under review; and
5. REVOKES resolution A.481(XII).

ANNEX 1

PRINCIPLES OF SAFE MANNING

- 1 The following principles should be observed in determining the minimum safe manning of a ship;
 - .1 the capability to:
 - .1.1 maintain safe navigational, engineering and radio watches in accordance with Regulation VIII/2 of the 1978 STCW Convention, as amended, and also maintain general surveillance of the ship;
 - .1.2 moor and unmoor the ship safely;
 - .1.3 manage the safety functions of the ship when employed in a stationary or near-stationary mode at sea;
 - .1.4 perform operations, as appropriate, for the prevention of damage to the marine environment;
 - .1.5 maintain the safety arrangements and the cleanliness of all accessible spaces to minimize the risk of fire;
 - .1.6 provide for medical care on board ship;
 - .1.7 ensure safe carriage of cargo during transit; and
 - .1.8 inspect and maintain, as appropriate, the structural integrity of the ship; and.
 - .2 the ability to operate:
 - .2.1 all watertight closing arrangements and maintain them in effective condition and also deploy a competent damage control party;
 - .2.2 all on-board fire-fighting and emergency equipment and life-saving appliances, carry out such maintenance of this equipment as is required to be done at sea, and muster and disembark all persons on board; and
 - .2.3 the main propulsion and auxiliary machinery and maintain them in a safe condition to enable the ship to overcome the foreseeable perils of the voyage.
- 2 In applying such principles, Administrations should take proper account of the existing IMO, ILO, ITU and WHO instruments in force which deal with:
 - .1 watchkeeping;
 - .2 hours of work or rest;

- .3 safety management;
 - .4 certification of seafarers;
 - .5 training of seafarers;
 - .6 occupational health and hygiene; and
 - .7 crew accommodation.
- 3 The following on-board functions, when applicable, should also be taken into account:
- .1 on-going training requirements for all personnel including the operation and use of fire-fighting and emergency equipment, life-saving appliances and watertight closing arrangements;
 - .2 specialized training requirements for particular types of ships;
 - .3 provision of proper food and drinking water;
 - .4 need to undertake emergency duties and responsibilities; and
 - .5 need to provide training opportunities for entrant seafarers to allow them to gain the training and experience needed.

ANNEX 2

GUIDELINES FOR THE APPLICATION OF PRINCIPLES OF SAFE MANNING

1 Introduction

1.1 These guidelines should be used in applying the principles of safe manning set out in annex 1 to this resolution to ensure the safe operation of, and the prevention of pollution from, ships to which Article III of the 1978 STCW Convention, as amended, applies.

1.2 An Administration may retain or adopt arrangements which differ from the provisions herein recommended and which are especially adapted to technical developments and to special types of ships and trades. However, at all times the Administration should satisfy itself that the detailed manning arrangements ensure a degree of safety at least equivalent to that established by these guidelines.

2 Hours of work or rest

2.1 Every company is obliged to ensure that the master, officers and ratings do not work more hours than is safe in relation to the performance of their duties and the safety of the vessel. The same responsibility is placed on the master in relation to the members of the ships complement. Manning levels should be such as to ensure that the time and place available for taking rest periods are appropriate for achieving a good quality of rest. Further guidance about fitness for duty is contained in section B-VIII/1 of the STCW Code.

2.2 A record of the actual hours of work performed by the individual seafarer should be maintained onboard, in order to verify that the minimum periods of rest required under relevant and applicable international instruments in force, have been complied with.

3 Determination of minimum safe manning levels

3.1 The purpose of determining the minimum safe manning level of a ship is to ensure that its complement includes the grades/capacities and number of persons required for the safe operation of the ship and the protection of the marine environment.

3.2 The minimum safe manning level of a ship should be established taking into account all relevant factors, including the following:

- .1 size and type of ship;
- .2 number, size and type of main propulsion units and auxiliaries;
- .3 construction and equipment of ship;
- .4 method of maintenance used;
- .5 cargo to be carried;
- .6 frequency of port calls, length and nature of voyages to be undertaken;

- .7 trading area(s), waters and operations in which the ship is involved;
- .8 extent to which training activities are conducted on board; and
- .9 applicable work hour limits and/or rest requirements.

3.3 The determination of the minimum safe manning level of a ship should be based on performance of the functions at the appropriate level(s) of responsibility, as specified in the STCW Code which include the following:

- .1 navigation, comprising the tasks, duties and responsibilities to:
 - .1 plan and conduct safe navigation;
 - .2 maintain a safe navigational watch in accordance with the requirements of the STCW Code;
 - .3 manoeuvre and handle the ship in all conditions; and
 - .4 moor and unmoor the ship safely.
- .2 cargo handling and stowage, comprising the tasks, duties and responsibilities to:
 - .1 plan, monitor and ensure safe loading, stowage, securing, care during the voyage and unloading of cargo to be carried on the ship.
- .3 the operation of the ship and care for persons on board, comprising the tasks, duties and responsibilities to:
 - .1 maintain safety and security of all persons on board and the operational condition of life-saving, fire-fighting and other safety systems;
 - .2 operate and maintain all watertight closing arrangements;
 - .3 perform operations, as appropriate, to muster and disembark all persons on board;
 - .4 perform operations, as appropriate, to ensure protection of the marine environment;
 - .5 provide for medical care on board the ship; and
 - .6 undertake administrative tasks required for the safe operation of the ship.
- .4 marine engineering, comprising the tasks, duties and responsibilities to:
 - .1 operate and monitor the ship's main propulsion and auxiliary machinery and evaluate the performance of such machinery;
 - .2 maintain a safe engineering watch in accordance with the requirements of the STCW Code;

- .3 manage and perform fuel and ballast operations; and
- .4 maintain safety of the ship's engine equipment, systems and services.
- .5 electrical, electronic and control engineering, comprising the tasks, duties and responsibilities to:
 - .1 operate the ship's electrical and electronic equipment; and
 - .2 maintain the safety of the ship's electrical and electronic systems.
- .6 radiocommunications, comprising the tasks, duties and responsibilities to:
 - .1 transmit and receive information using the radio equipment of the ship;
 - .2 maintain a safe radio watch in accordance with the requirements of ITU Radio Regulations and 1974 SOLAS Regulations, as amended;
 - .3 provide radio services in emergencies.
- .7 maintenance and repair, comprising the tasks, duties and responsibilities to:
 - .1 carry out maintenance and repair work to the ship and its machinery, equipment and systems, as appropriate to the method of maintenance and repair used.

3.4 In addition to the factors and functions in paragraphs 3.2 and 3.3, the determination of the minimum safe manning level should also take into account:

- .1 the management of the safety functions of a vessel at sea, when not underway;
- .2 except in ships of limited size, the provision of qualified deck officers in order that it is not necessary for the master to keep regular watches, by the adoption of a three watch system;
- .3 except in ships of limited propulsion power or operating under provisions for unattended machinery spaces, the provision of qualified engineer officers in order that it is not necessary for the chief engineer to keep regular watches, by the adoption of a three watch system;
- .4 the maintenance of applicable occupational health and hygiene standards on board; and
- .5 the provision of proper food and drinking water for all persons on board, as required.

3.5 In determining the minimum safe manning level of a ship consideration should also be given to:

- .1 the number of qualified and other personnel, required to meet peak workload situations and conditions, with due regard to the number of hours of shipboard duties and rest periods assigned to seafarers; and

- .2 the capability of the master and the ship's complement to co-ordinate the activities for the safe operation of the ship and the protection of the marine environment.

4 Responsibilities of companies

4.1 The Administration may require the company responsible for the operation of the ship to prepare and submit its proposal for the minimum safe manning level of a ship in accordance with a form specified by the Administration.

4.2 In preparing the proposal for the minimum safe manning level of a ship, the company should apply the principles, recommendations and guidelines contained in this resolution and should be required to:

- .1 make an assessment of the tasks, duties and responsibilities of the ship's complement required for its safe operation, protection of the marine environment, and to deal with emergency situations;
- .2 make an assessment of numbers and grades/capacities of the ship's complement required for its safe operation, protection of the marine environment, and dealing with emergency situations;
- .3 prepare and submit to the Administration a proposal for the minimum safe manning level based upon the assessment of the numbers and grades/capacities of the ship's complement required for its safe operation, protection of the marine environment and justifying as to how the proposed ship's complement will deal with emergency situations, including the evacuation of passengers, where necessary;
- .4 ensure that the minimum safe manning level is adequate at all times and in all respects, including meeting peak workload situations, conditions and requirements, and in accordance with the principles, recommendations and guidelines contained in this resolution; and
- .5 prepare and submit to the Administration a new proposal for the minimum safe manning level of a ship in the case of changes in trading area(s), construction, machinery, equipment or operation and maintenance of the ship, which may affect the safe manning level.

5 Approval by the Administration

5.1 A proposal for the minimum safe manning level of a ship, submitted by a company to the Administration, should be evaluated by the Administration to assess whether:

- .1 the proposed ship's complement contains the grades/capacities and numbers of personnel to fulfill the tasks, duties and responsibilities required for the safe operation of the ship, protection of the marine environment and to deal with emergency situations; and
- .2 the master, officers and other members of the ship's complement are not required to work more hours than is safe in relation to the performance of their duties and the safety of the vessel and that the requirements for work and rest hours, in accordance with applicable national regulations, can be complied with.

5.2 The Administration should require a company to amend a proposal for the minimum safe manning level of a ship, if after evaluation of the original proposal submitted by the company, the Administration was unable to approve the proposed composition of the ship's complement.

5.3 The Administration should only approve a proposal for the minimum safe manning level of a ship and issue accordingly a minimum safe manning document for the ship, if the Administration is fully satisfied that the proposed ship's complement is established in accordance with the principles, recommendations and guidelines contained in this resolution, and is adequate in all respects for the safe operation of the ship and the protection of the marine environment.

5.4 The Administration may withdraw the minimum safe manning document of a ship, if the company fails to submit a new proposal for the ship's minimum safe manning level, when changes in trading area(s), construction, machinery, equipment or operation and maintenance of the ship have taken place, which affect the minimum safe manning level.

5.5 The Administration should review and may withdraw, as appropriate, the minimum safe manning document of a ship which persistently fails to be in compliance with the rest hours requirements.

ANNEX 3

GUIDANCE ON CONTENTS AND MODEL FORM OF MINIMUM SAFE MANNING DOCUMENT

1 The following information should be stated in the minimum safe manning document issued by the Administration specifying the minimum safe manning level:

- .1 a clear statement of the ship's name, port of registry, distinctive number or letters, IMO number, gross tonnage, main propulsion power, type and trading area and whether the machinery space is unattended or not;
- .2 a table showing the numbers and grades/capacities of the personnel required to be carried, together with any special conditions or other remarks;
- .3 a formal statement by the Administration that, in accordance with the principles and guidelines set out in annexes 1 and 2, the ship named in the document is considered to be safely manned if, whenever it proceeds to sea, it carries not less than the number and grades/capacities of personnel shown in the document, subject to any special conditions stated therein;
- .4 a statement as to any limitations on the validity of the document by reference to particulars of the individual ship and the nature of service upon which it is engaged; and
- .5 the date of issue and any expiry date of the document together with a signature for and the seal of the Administration.

2 It is recommended that the minimum safe manning document be drawn up in the form corresponding to the model given in the appendix to this annex. If the language used is not English, the information given should include a translation into English.

APPENDIX

MODEL FORM OF MINIMUM SAFE MANNING DOCUMENT

MINIMUM SAFE MANNING DOCUMENT

(Official seal)

(State)

Issued under the provisions of regulation V/13(b) of the
INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974, as amended

under the authority of the Government of

(name of the State)

by

(Administration)

*Particulars of ship**

Name of ship
Distinctive number or letters.....
IMO number.....
Port of registry.....
Gross tonnage:
 National.....
 International Tonnage Convention, 1969.....
Main propulsion power (kW).....
Type of ship.....

Periodically unattended machinery space yes/no

* Alternatively the particulars of the ship may be placed horizontally

Trading area**

The ship named in this document is considered to be safely manned if, when it proceeds to sea, it carries not less than the number and grades/capacities of personnel specified in the table(s) below.

Grade/capacity	Certificate (STCW regulation)	Number of persons

Special requirements or conditions, if any:

Issued at.....on the.....day of.....
(month and year)

Date of expiry (if any).....

(Seal of the Administration)

(Signature for and on behalf of the Administration)

** Where a trading area other than unlimited is shown a clear description or map of the trading area is to be included in the document.

ANNEX 10**DRAFT ASSEMBLY RESOLUTION****UNLAWFUL PRACTICES ASSOCIATED WITH
CERTIFICATES OF COMPETENCY AND ENDORSEMENTS**

THE ASSEMBLY,

RECALLING Article 15(j) of the Convention on the International Maritime Organization concerning the functions of the Assembly in relation to regulations and guidelines concerning maritime safety,

BEING AWARE of reports from Member Governments of unlawful practices associated with certificates of competency and endorsements issued in accordance with the provisions of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW), 1978, as amended, which had been found during port State control inspections or on application for recognition of certificates,

RECOGNIZING the potential hazards and the consequences for the safety of life at sea and the protection of the marine environment posed by seafarers with counterfeit, forged or fraudulently obtained certificates and endorsements,

DESIRING to promote the objectives and goals of the 1995 amendments to the 1978 STCW Convention, in order to reduce the loss of life at sea and pollution of the marine environment,

HAVING CONSIDERED the recommendation made by the Maritime Safety Committee at its seventy-first session,

1. REMINDS all STCW Parties of their obligations under STCW regulation I/9.4.2 and stresses the importance of full co-operation in response to requests for information by other STCW Parties concerning the authenticity and validity of certificates and endorsements;

2. INVITES STCW Parties, which recognize certificates issued by another STCW Party for service on board its ships, whenever they issue an endorsement of recognition with respect to certificates issued under the relevant provisions of the STCW Convention which were in force immediately prior to 1 February 1997, and when in doubt to consult with the issuing authority in order to confirm the authenticity and validity of the underlying certificate or endorsement and to show, in clear terms and as a minimum, the functions, capacity and limitations which apply in each particular case, regarding the underlying certificate;

[3. INVITES FURTHER STCW Parties to report to the Organization details of the failure by any STCW Party to provide the information required by STCW regulation I/9.4.2];

[4. REQUESTS STCW Parties, which issue and endorse certificates of competency in accordance with the relevant provisions of the STCW Convention which were in force immediately prior to 1 February 1997, to consider including in these endorsements in clear terms the functions, capacity and limitations which apply to the certificate and its endorsement];

5. URGES STCW Parties to intensify their efforts and take all possible steps in accordance with STCW regulation I/5 to investigate cases and prosecute, or assist in the investigation and prosecution of, those found to be knowingly involved in the processing or obtaining of certificates or endorsements using unlawful means, including the holders of such certificates or endorsements;

6. URGES ALSO STCW Parties to intensify their efforts for the purpose of eliminating the unlawful practices referred to above and to expeditiously exchange information between the issuing Party and any other Party who has doubts as to the authenticity or validity of any certificate of competency or endorsement.

ANNEX 11**DRAFT ASSEMBLY RESOLUTION****SELF-ASSESSMENT OF FLAG STATE PERFORMANCE**

THE ASSEMBLY,

RECALLING Article 15(j) of the Convention on the International Maritime Organization concerning the functions of the Assembly in relation to regulations and guidelines concerning maritime safety and the prevention and control of marine pollution from ships,

RECALLING ALSO that one of the goals of the Organization is the consistent and effective implementation of IMO instruments globally and compliance with their requirements,

RECALLING FURTHER that amongst the objectives of the Organization is the assessment of the current level of implementation and the identification of those areas where flag States have difficulties in fully implementing IMO instruments to which they are party, paying special attention to difficulties encountered by some Member States,

FURTHER RECALLING that, at its eighteenth session, with the adoption of resolution A.777(18), it reaffirmed the content of resolution A.500(XII) and thus the assignment of the highest priority to promoting the implementation of relevant international instruments for the improvement of maritime safety and pollution prevention,

RECOGNIZING that States are required to meet and fulfill the obligations and the responsibilities which are set forth in international regulations, procedures and practices contained in IMO instruments and other mandatory instruments which they adopt and to take any steps which may be necessary to secure their observance,

RECOGNIZING ALSO that Parties to international conventions, such as: the United Nations Convention on the Law of the Sea, 1982 (UNCLOS); the International Convention on the Safety of Life at Sea, 1974, as amended (SOLAS 1974); the Protocol of 1978 relating to the International Convention on the Prevention of Pollution from Ships, 1973, as amended (MARPOL 73/78); the Convention on the International Regulations for Preventing Collisions, 1972, as amended (COLREG 1972); the International Convention on Load Lines, 1966 (LL 1966); and the International Convention on Tonnage Measurement of Ships, 1969 (TONNAGE 1969), have, as part of the ratification process, accepted the obligation under applicable international law to fully meet their responsibilities and to discharge their obligations as prescribed by the conventions and instruments to which they are party,

REAFFIRMING its desire that ships comply at all times with maritime safety and pollution prevention standards laid down in relevant international instruments,

REAFFIRMING ALSO that flag States have the primary responsibility to have in place an adequate and effective system to exercise control over ships entitled to fly their flag and to ensure they comply with relevant international rules and regulations,

HAVING ADOPTED resolution A.847(20) - Guidelines to assist flag States in the implementation of IMO instruments, resolution A.739(18) - Guidelines for the authorization of organizations acting on behalf of the Administration and resolution A.789(19) - Specifications on the survey and certification functions of recognized organizations acting on behalf of the Administration,

NOTING that, while States may realize certain benefits by becoming party to instruments aiming at promoting maritime safety and the prevention of pollution from ships, these desired benefits can only be fully achieved when all Parties concerned carry out their obligations as required by the conventions,

NOTING FURTHER that the ultimate effectiveness of any instrument depends, *inter alia*, upon all States:

- (a) becoming party to the instruments mentioned above;
- (b) implementing them fully and effectively;
- (c) enforcing them rigorously; and
- (d) reporting to the Organization, as required,

CONSCIOUS of the difficulties a number of Member States may face in giving full and complete effect to all the provisions of the various IMO instruments to which they are party.

RECOGNIZING that any such difficulties need to be minimized and for that reason the Organization has established and maintains an integrated Technical Co-operation Programme,

WELCOMING the decision of the Maritime Safety Committee, at its seventieth session, to draw up clear criteria against which the success of the performance of the flag States might be assessed,

UNDERSTANDING that the development, acceptance and adoption of such internal and external criteria be used for the self-assessment of the ability, capacity and performance of States, to carry out and fulfill the obligations and responsibilities they undertake to perform by becoming Parties to various instruments is still in progress,

BEING DESIROUS to assist further Member States in improving their capabilities and performance as flag States and in giving full and complete effect to the instruments to which they are Party,

HAVING CONSIDERED the recommendation made by the Maritime Safety Committee at its seventy-first session and by the Marine Environment Protection Committee at its [forty-third] session,

1. ADOPTS the Guidance to assist flag States in the self-assessment of their performance, as set out in the Annex to the present resolution;
2. URGES Member Governments, in their efforts to improve safety of life at sea and to protect the marine environment, to carry out, at regular intervals at their discretion, a self-assessment of their capabilities and performance in giving full and complete effect to the various instruments to which they are Party;

3. URGES ALSO Member Governments to use the Guidance, in conjunction with resolution A.847(20), and to bear in mind the relevant provisions of the various IMO instruments to which they are Party, when assessing their performance as a flag State in the context of these instruments;
4. ENCOURAGES Member Governments, when seeking technical assistance from or through the Organization, to provide the Secretary-General with the results of their most recent self-assessment, so as to enable and assist the Secretary-General to identify, qualify and quantify, in consultation with the State concerned, the needs and the priorities of the State in question. For this purpose, any submission of the results is not a prerequisite for seeking or obtaining technical assistance. In this respect, any such submission is to be treated with the utmost and strictest confidence;
5. INVITES Member Governments to submit, on a voluntary basis, to the Organization a copy of their self-assessment report in order to enable the establishment of a database which would assist the Organization in its efforts to achieve consistent and effective implementation of IMO instruments;
6. REQUESTS the Maritime Safety Committee and the Marine Environment Protection Committee to consider other measures necessary to ensure the effective and consistent global implementation of IMO instruments and, in doing so, to pay particular attention to the special difficulties faced by some Member States; and
7. REQUESTS ALSO the Maritime Safety Committee and the Marine Environment Protection Committee to keep the Guidance under continuous review and update it in the light of their work on the matter.

ANNEX

GUIDANCE TO ASSIST FLAG STATES IN THE SELF-ASSESSMENT OF THEIR PERFORMANCE

General obligations of flag States

1 It is the responsibility of flag States to ensure that they establish and maintain measures for the effective application and enforcement of the IMO instruments to which they are a party. From the point of view of flag State implementation the most significant IMO instruments are:

- .1 the International Convention for the Safety of Life at Sea, 1974 (SOLAS 74), as amended;
- .2 the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78), as amended;
- .3 the International Convention on Load Lines, 1966 (LL 66);
- .4 the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978 (STCW 78), as amended;
- .5 the Convention on the International Regulations for Preventing Collisions at Sea, 1972, (COLREG 72), as amended; and
- .6 the International Convention on Tonnage Measurement of Ships, 1969 (Tonnage 69).

Regard should also be given to the United Nations Convention on the Law of the Sea (UNCLOS).

2 Having accepted an instrument, a Government is bound by the provisions of the instrument to promulgate laws in relation to the implementation of its provisions through appropriate national legislation (e.g. SOLAS 74 article 1(b)). The undertaking to give effect to the provisions of the relevant instrument (e.g. SOLAS 74 article 1 (a)) means that the Government must have a functioning legislative body to enact laws for ships flying its flag and to provide for their subsequent implementation and enforcement.

Internal criteria for the assessment of flag State performance

3 "**Internal**" criteria are those which are directly relevant to the operation of the flag State as an Administration and are designed to give a clear indication of the effectiveness of a flag State Administration in fulfilling its obligations under the instruments. Guidance on flag State responsibilities is contained in Assembly resolution A.847(20) on Guidelines to assist flag States in the implementation of IMO instruments. Article 94 of UNCLOS also sets out the duties of the State Parties (Article 1.2(1)). Article 217 of UNCLOS is also relevant in detailing the enforcement responsibilities of flag States. Based on international instruments, a flag State has responsibilities relating, in particular, to setting legal requirements to give national effect to the instruments to which it is a Party; enforcement of those requirements; authorization of organizations acting on its behalf and casualty investigation. These are considered in more detail below.

Legal framework

- 4 A flag State should:
- .1 take measures to ensure safety at sea and pollution prevention for ships entitled to fly its flag with regard to:
 - .1 the construction, equipment and management of ships;
 - .2 the principles and rules with respect to the limits to which ships may be loaded;
 - .3 the prevention, reduction and control of pollution of the marine environment and the minimization of the impact of accidental discharges of pollutants;
 - .4 the manning of ships and the training of crews; and
 - .5 the safety of navigation (including taking part in mandatory reporting and routing systems), maintenance of communications and prevention of collisions;
 - .2 promulgate laws which permit effective jurisdiction and control in administrative, technical and social matters over ships flying its flag and, in particular, relating to the inspection of ships, safety and pollution prevention laws applying to such ships and the making of associated regulations; and
 - .3 promulgate laws providing the legal basis for the establishment of a registry and maintain a register of ships flying its flag.

Enforcement

- 5 A flag State should:
- .1 provide for the enforcement of its national laws, including the associated investigative and penalty processes;
 - .2 take appropriate action against ships flying its flag that fail to comply with applicable requirements;
 - .3 ensure the availability of sufficient personnel with maritime and technical expertise to carry out its flag State responsibilities, including:
 - .1 the development and enforcement of necessary national laws;
 - .2 the establishment and maintenance of minimum safe manning levels on board ships flying its flag and provision of effective certification of seafarers;

- .3 the inspection of ships flying its flag to ensure compliance with the requirements of international instruments to which the flag State is a Party;
- .4 the reporting of casualties and incidents as required by the respective instruments; and
- .5 the investigation of circumstances following any detention of ships flying its flag.

Responsibility of recognized organizations acting on behalf of the Administration

6 In the case where a flag State authorizes third party organizations to act on its behalf, i.e. recognized organizations, any delegation of authority to these recognized organizations must be clearly recorded and shall follow as a minimum the Guidelines for the authorization of organizations acting on behalf of the Administration (resolution A.739(18)) and the Specifications on the survey and certification functions of recognized organizations acting on behalf of the Administration (resolution A.789(19)). The requirements in SOLAS 74, chapter I, Regulation 6 (c), and the analogous requirements of MARPOL 73/78 should be included in any delegation of authority. The flag State must also take full responsibility for all safety and pollution prevention certificates issued under the relevant instruments by itself or on its behalf.

Casualty and incident investigation

7 A flag State should undertake prompt and thorough casualty and incident investigations and submit relevant reports to IMO, as appropriate.

External criteria for the assessment of flag State performance

8 "**External**" criteria refer to information, in particular port State control data and casualty accident data, which may also be taken to be indicators of the way in which a flag State is performing. The following are indicators of the way in which the flag State is performing but do not relate directly to the organization of the flag State's Administration. When used as indicators, those listed as 8.1 to 8.5 must be considered in proportion to the overall number of ships flying its flag, subject to international instruments to which the State is a Party.

- .1 Number of accidents, casualties and incidents reportable to IMO in terms of the requirements of the international casualty database.
- .2 Number of accidents involving personal injuries leading to absence from duty of 3 days or more on board ships flying the flag of the State concerned.
- .3 Number of lives lost on its ships resulting from the operation of ships flying its flag.
- .4 Number of ships lost.

- .5 Number of incidents of loss of pollutants into the sea according to MARPOL 73/78 reporting standards, including a measure of the seriousness of the incidents.
- .6 Number of ships detained by other States under port State control procedures.
- .7 Communication to IMO of information required in mandatory instruments.

Self-assessment form

9 Based on the internal and external criteria outlined above, a self-assessment form is attached. The primary objective of the form is to assist flag States in assessing their performance against these criteria. Questions relating to the STCW Convention have not been included because that instrument has its own assessment procedures.

APPENDIX

FLAG STATE PERFORMANCE SELF-ASSESSMENT FORM

All questions relate to merchant ships flying the flag of the State concerned.

GENERAL	
<p>1. Name of State/Associate Member</p> <p><i>List the Administrations which you represent at IMO (a separate assessment form should be completed for each. Include all flag States, including those which are not Member States of IMO but are Parties to IMO instruments).</i></p>	
<p>2. Name of contact person responsible for the completion of this form</p> <p>Name of Administration</p> <p>Address</p> <p>Telephone number</p> <p>Fax number</p> <p>E-mail address</p>	

<p>3. Indicate to which of the following international instruments your State is a Party and which (optional) MARPOL 73/78 Annexes have been ratified.</p> <p style="text-align: center;"> <i>SOLAS 74</i> <i>SOLAS Protocol 78</i> <i>MARPOL 73/78</i> <i>Annex III</i> <i>Annex IV</i> <i>Annex V</i> <i>Annex VI</i> <i>LL 66</i> <i>TONNAGE 69</i> <i>COLREG 72</i> <i>UNCLOS</i> </p>	<p>Yes/No Yes/No Yes/No Yes/No Yes/No Yes/No Yes/No Yes/No Yes/No Yes/No Yes/No</p>
<p>4.1 How many merchant ships of 100 gross tonnage and upwards, subject to the relevant instruments you indicated in question 3, are currently flying the flag of your State?</p> <p>4.2 What is the total gross tonnage of merchant ships flying the flag of your State?</p>	<p>MS:</p>
<p>INTERNAL CRITERIA</p>	
<p>Legal framework</p>	
<p>5. Does your Administration have the necessary laws in force to implement international maritime safety and pollution prevention instruments with regard to:</p> <p>.1 the construction, equipment and management of ships;</p> <p>.2 the prevention, reduction and control of pollution of the marine environment;</p> <p>.3 the safe loading of ships;</p>	<p>Yes/No Yes/No Yes/No</p>

<p>.4 the manning of ships;</p> <p>.5 the safety of navigation (including taking part in mandatory reporting and routing systems), maintenance of communications and prevention of collisions?</p>	<p>Yes/No</p> <p>Yes/No</p>
<p>6. Does your Administration have the necessary laws in force to ensure the provision of penalties of adequate severity to discourage violation of international instruments to which your State is a Party?</p>	<p>Yes/No</p>
<p>7. Does your Administration have the necessary laws in force to provide for ship inspections to ensure compliance with international maritime safety and pollution prevention standards, to which your State is a Party?</p>	<p>Yes/No</p>
<p>8. Does your Administration have the necessary laws in force to take legal action against ships which have been identified as not being in compliance with the international instruments to which your State is a Party?</p>	<p>Yes/No</p>
<p>9. Does your Administration have the necessary laws in force to carry out the required casualty investigations?</p>	<p>Yes/No</p>
<p>Enforcement</p>	
<p>10. Does your Administration have an infrastructure, including personnel with appropriate technical expertise and experience, to:</p> <p>.1 identify ships flying the flag of your State which are not in compliance with international maritime safety and pollution prevention requirements?</p> <p>.2 take action against ships flying the flag of your State which have been identified as not being in compliance with international maritime safety and pollution prevention requirements?</p> <p>- If yes, against how many such ships was action taken for each of the previous 5 years*?</p>	<p>Yes/No</p> <p>Yes/No</p> <p>....</p>

<p>11. Did your Administration investigate detentions by port States of ships flying the flag of your State for each of the previous 5 years*? (see also question 28)</p> <p>- If yes, indicate how many such detentions were investigated.</p>	<p>Yes/No</p> <p>....</p>
<p>Recognized organizations acting on behalf of the Administration</p>	
<p>12. Which organizations has your Administration recognized for the purpose of delegation of authority under the relevant instruments you indicate under question 3?</p>	
<p>13. When your Administration delegates authority to recognized organizations, does it follow resolutions A.739(18) and A.789(19) as minimum requirements, the requirements in SOLAS 74, regulation XI/1, and the analogous requirements in MARPOL 73/78 in any delegation of authority?</p>	<p>Yes/No</p>
<p>14. Has your Administration provided IMO with a copy of the formal agreement or equivalent legal arrangements with the recognized organizations listed in question 12?</p>	<p>Yes/No</p>
<p>15. Indicate which survey and/or certification functions your Administration has delegated to the recognized organizations referred to in question 12.</p>	
<p>16. Indicate, for the instruments you listed under question 3, which survey and/or certification functions are carried out by your Administration.</p>	
<p>17. Does your Administration carry out the verification and monitoring functions specified in resolution A.739(18)?</p>	<p>Yes/No</p>
<p>18. How does your Administration carry out the verification and monitoring functions specified in resolution A.739(18)?</p>	
<p>19. How often does your Administration verify and monitor the work of recognized organizations acting on its behalf?</p>	<p>Every..... months</p>

<p>20. How does your Administration take specific responsibility for international certificates issued on its behalf by dependent territories/second registers?</p>	
<p>Casualty and incident investigation</p>	
<p>21. Does your Administration have the means (financial and administrative) to ensure that thorough and prompt casualty and incident investigations into all cases of serious and very serious casualties, as defined in paragraphs 4.2 and 4.3 of the Annex to resolution A.849(20), are carried out?</p>	<p>Yes/No</p>
<p>22. For each of the previous 5 years*, for ships flying the flag of your State:</p> <p>.1 How many serious and very serious casualties and incidents were investigated?</p> <p>.2 How many such casualties and incidents were reported to IMO?</p>	
<p>23. Can your Administration provide to IMO, on request, evidence which shows that casualties and incidents on ships flying the flag of your State have been investigated?</p>	<p>Yes/No</p>
<p>24. For each of the previous 5 years*, has your Administration provided IMO with the mandatory annual reporting required by article 11.1(f) of MARPOL 73/78?</p>	<p>Yes/No</p>
<p>25. How many allegations of violations, according to article 4 of MARPOL 73/78, have been made against ships flying the flag of your State in each of the previous 5 years*?</p> <p>.1 How many investigations or legal proceedings has your Administration carried out in the previous 5 years* in accordance with articles 4 and 6 of MARPOL?</p> <p>.2 In how many cases did your Administration report back to the reporting State or to IMO in each of the previous 5 years*?</p>	

EXTERNAL CRITERIA	
<p>26. For each of the previous 5 years*, how many ships flying the flag of your State:</p> <p>.1 have been involved in serious or very serious casualties?</p> <p>.2 have become total losses or constructive total losses?</p> <p>.3 have caused severe pollution**?</p> <p>.4 What casualty rate per 1000 ships does this represent?</p> <p>.5 What is the total tonnage involved as a percentage of the total fleet?</p>	
<p>27. In each of the previous 5 years*, how many lives have been lost:</p> <p>.1 in casualties involving ships flying the flag of your State?</p> <p>.2 due to occupational accidents (i.e. other than from casualties to ships) on ships flying the flag of your State?</p> <p><i>NB - Includes: falls; boarding or disembarking; accidents on deck and in machinery spaces; deaths in enclosed spaces; but does not include: accidents ashore; homicide; suicide; or deaths from disease or natural causes.</i></p>	
<p>28. .1 For each of the previous 5 years*, how many ships flying the flag of your State were detained, within the scope of SOLAS 74, MARPOL 73/78, LL 66 or COLREG 72, by port States?</p> <p>.2 What detention rate per 1000 ship inspections does this represent? (see also question 11).</p>	

* or from the date your Government became a Party to the relevant instrument, if that is later.

** "Severe pollution" is a case of pollution which, as evaluated by the coastal State(s) affected or the flag State, as appropriate, produces a major deleterious effect upon the environment, or which would have produced such an effect without preventive action.

ANNEX 12

DRAFT ASSEMBLY RESOLUTION

**AMENDMENTS TO THE CODE FOR THE INVESTIGATION OF MARINE CASUALTIES
AND INCIDENTS (RESOLUTION A.849(20))**

THE ASSEMBLY,

RECALLING Article 15(j) of the Convention on the International Maritime Organization concerning the functions of the Assembly in relation to regulations and guidelines concerning maritime safety and the prevention and control of marine pollution from ships,

RECALLING ALSO resolution A.849(20) by which it adopted the Code for the Investigation of Marine Casualties and Incidents,

CONSIDERING that practical advice for the systematic investigation of human factors in marine casualties and incidents will assist an effective analysis and promote the identification and implementation of preventive action,

RECOGNIZING the need for development and use, as appropriate, of practical guidelines for the investigation of human factors in marine casualties and incidents,

HAVING CONSIDERED the recommendation made by the Maritime Safety Committee at its seventy-first session and by the Marine Environment Protection Committee and at its [forty-third] session,

1. ADOPTS amendments to the Code for the Investigation of Marine Casualties and Incidents incorporating the Guidelines for the Investigation of Human Factors in Marine Casualties and Incidents, as set out in the Annex to the present resolution;
2. INVITES Governments to implement the Guidelines as soon as practicable, as far as national law allows, with a view towards improving the quality and completeness of casualty investigations and reports;
3. AUTHORIZES the Maritime Safety Committee and the Marine Environment Protection Committee to keep the Guidelines under review and amend them as necessary.

ANNEX

**AMENDMENTS TO THE CODE FOR THE INVESTIGATION OF
MARINE CASUALTIES AND INCIDENTS (resolution A.849(20))**

- 1 Existing appendix is renumbered as appendix 1.
- 2 A new appendix 2 is added as follows:

"APPENDIX 2

**GUIDELINES FOR THE INVESTIGATION OF HUMAN FACTORS
IN MARINE CASUALTIES AND INCIDENTS**

CONTENTS

- 1 Introduction - Purpose of the Guidelines
- 2 Investigation procedures and techniques
 - 2.1 A systematic approach
 - 2.2 General
 - 2.2.1 Timing of the investigation
 - 2.2.2 The occurrence site
 - 2.2.3 Witness information
 - 2.2.4 Background information
 - 2.2.5 The investigation sequence
 - 2.2.6 Fact-finding
 - 2.2.7 Conducting interviews
 - 2.2.8 Selection of interviewees
 - 2.2.8.1 On site (those nearest the incident)
 - 2.2.8.2 Remote from the occurrence site
 - 2.3 Topics to be covered by the investigator
 - 2.3.1 People factors
 - 2.3.2 Organization on board
 - 2.3.3 Working and living conditions
 - 2.3.4 Ship factors
 - 2.3.5 Shore side management
 - 2.3.6 External influences and environment

- 2.4 Analysis
 - 2.4.1 Fact-finding and analysis
- 2.5 Safety action
- 3 Reporting procedures
- 4 Qualifications and training of investigators

APPENDICES

APPENDIX 1 The ILO/IMO process for investigating human factors

APPENDIX 2 Areas of human factors inquiry

APPENDIX 3 Definitions - Common human element terms

APPENDIX 4 Selected bibliography of UNCLOS/ILO/IMO requirements and recommendations related to the investigation of human factors in marine casualties and incidents

1 INTRODUCTION - PURPOSE OF THE GUIDELINES

1.1 The purpose of these Guidelines is to provide practical advice for the systematic investigation of human factors in marine casualties and incidents and to allow the development of effective analysis and preventive action. The long term intent is to prevent similar casualties and incidents in the future¹.

1.2 Ships operate in a highly dynamic environment; frequently the people on board follow a set routine of shift work disrupted by arrival at, working in, and sailing from port. This is an existence which involves living in the place of work for prolonged periods creating a unique form of working life which almost certainly increases the risk of human error.

1.3 Historically, the international maritime community has approached maritime safety from a predominantly technical perspective. The conventional wisdom has been to apply engineering and technological solutions to promote safety and minimize the consequences of marine casualties and incidents. Accordingly, safety standards have primarily addressed ship design and equipment requirements. Despite these technical innovations, significant marine casualties and incidents have continued to occur.

¹ For the purpose of these Guidelines, the term "marine casualties and incidents" includes occupational accidents resulting in loss of life or serious personal injury.

1.4 Analyses of marine casualties and incidents that have occurred over the past 30 years have prompted the international maritime community and the various safety regimes concerned to evolve from an approach which focuses on technical requirements for ship design and equipment to one which seeks to recognize and more fully address the role of human factors in maritime safety within the entire marine industry. These general analysis have indicated, that given the involvement of the human in all aspects of marine endeavours including design, manufacture, management, operations and maintenance, almost all marine casualties and incidents involve human factors.

1.5 One way the maritime community has sought to address the contribution of the human factor to marine casualties and incidents has been to emphasize the proper training and certification of ships' crews. It has become increasingly clear, however, that training is only one aspect of human factors. There are other factors which contribute to marine casualties and incidents which must be understood, investigated and addressed. The following are examples of these factors relevant to the maritime industry: communication, competence, culture, experience, fatigue, health, situational awareness, stress and working conditions.

1.6 Human factors which contribute to marine casualties and incidents may be broadly defined as the acts or omissions, intentional or otherwise, which adversely affect the proper functioning of a particular system, or the successful performance of a particular task. Understanding human factors thus requires the study and analysis of the design of the equipment, the interaction of the human operator with the equipment and the procedures the crew and management followed.

1.7 It has been recognized that there is a critical need for guidance for accident investigators which will assist them to identify specific human factors which have contributed to marine casualties and incidents. There is also a need to provide practical information on techniques and procedures for the systematic collection and analysis of information on human factors during investigations. These Guidelines seek to fulfill those needs. They include a list of topics which should be considered by investigators and procedures for recording and reporting the results.

1.8 These Guidelines should result in an increased awareness by all involved in the entire marine industry of the role human factors play in marine casualties and incidents. This awareness should lead to proactive measures by the maritime community which in turn will result in the saving of lives, ships, cargo and the protection of the marine environment, improvements to the lives of marine personnel, and more efficient and safer shipping operations.

1.9 These Guidelines apply, as far as national laws allow, to the investigation of marine casualties or incidents where either one or more interested States have a substantial interest in a marine casualty involving a ship under or within their jurisdiction.

2 INVESTIGATION PROCEDURES AND TECHNIQUES

2.1 A systematic approach

2.1.1 The following is a process that provides a step-by-step systematic approach for use in the investigation of human factors. The process is an integration and adaptation of a number of established human factor frameworks. The process can be applied to any type of marine casualty and incident and consists of the following steps:

- .1 collect occurrence data;

- .2 determine occurrence sequence;
- .3 identify unsafe acts (decisions) and unsafe conditions,

and then for each unsafe act (decision),

- .4 identify the error type or violation;
- .5 identify underlying factors; and
- .6 identify potential safety problems and develop safety actions.

This process is detailed in appendix 1.

2.1.2 A systematic approach to Step 1 is crucial to ensure that critical information is not overlooked or lost and that a comprehensive analysis is possible.

2.1.3 Step 2 describes a process involved in organizing the data collected in Step 1 to develop a sequence of events and circumstances.

2.1.4 In Step 3, the information gathered and organized is used to initiate the identification of occurrence causal factors, i.e., unsafe acts, decisions or conditions. When an unsafe act, decision or condition is identified, the process shifts to determining the genesis of that particular act, decision or condition.

2.1.5 Step 4 is initiated for each identified unsafe act or decision in order to specify the type of error or violation involved.

2.1.6 In Step 5, the focus is placed on uncovering the underlying factors behind the unsafe act decision or condition. Fundamental to the process is the notion that for each underlying factor, there may be one or more associated unsafe act, decision or condition. The re-examination each step of the process emphasizes the iterative nature of this process in that it may show where further investigation is necessary.

2.1.7 Finally, Step 6 requires the identification of potential safety problems and proposed safety action based on the identified underlying factors.

2.2 General consideration

An occurrence may result in serious injury, illness, damage or environmental impact and sometimes all four. The purpose of a marine casualty or occurrence safety investigation is to *prevent* recurrence of similar occurrences by identifying and recommending remedial action. All minor occurrences of high potential in terms of credible result should be subject of full investigation. Studies have shown that occurrences can have many causal factors and that underlying causes often exist remote from the incident site. Proper identification of such causes requires timely and methodical investigation, going far beyond the immediate evidence and looking for underlying conditions which may cause other future occurrences. Occurrence investigation should therefore be seen as a means to identify not only immediate causes, but also failures in the total management of the operation from policy through to implementation. For this reason investigations should be broad enough to meet this overriding criteria.

2.2.1 Timing of the investigation

An investigation should be carried out as soon as possible after an occurrence. The quality of evidence, particularly that relying on the accuracy of human recollection, can deteriorate rapidly with time, and delayed investigations are usually not as conclusive as those performed promptly. A prompt investigation is also a good demonstration of commitment by all those concerned.

2.2.2 The occurrence site

Where possible, the site of the occurrence should be left unchanged until the investigation team has inspected it. Where this is not possible, for instance to make essential and immediate repairs following serious structural damage, the scene should be documented by photographs, audio visual recordings or sketches or any other relevant means available with the object of preserving vital evidence and possibly recreating the circumstances at a later date. Of particular importance is the recording of the position of individuals at the site, the condition and position of equipment, supervisory instructions, work permits and recording charts. Damage or failed components should be kept in a secure location to await the arrival of the investigation team who may require detailed scientific examination of certain key objects. Such key objects should be carefully marked.

2.2.3 Witness information

Once the situation in the immediate aftermath of an occurrence has been stabilised and the threat to people, plant and the environment has been removed, everyone involved should commit their recollections to paper to assist in preserving their memory of events. In the event that local authorities take over responsibility for the investigation, the organisation/company involved should nominate a focal point to liaise with the authorities and to assist them in assembling the information they require. Where necessary legal assistance should be provided.

2.2.4 Background information

Appropriate background information should be obtained before visiting the occurrence location. Such information might include but is not necessarily limited to:

- procedures for the type of operation involved;
- records of instructions / briefings given on the particular job being investigated;
- location plans;
- command structure and persons involved;
- messages, directions, etc., given from base/headquarters concerning the work;
- vessel particulars and plans; and
- any other relevant information that may allow the investigator to understand the context of the incident.

2.2.5 The investigation sequence

2.2.5.1 The method for fact-finding while conducting an investigation includes but is not necessarily limited to the following activities:

- inspecting the location;
- gathering or recording physical evidence;
- interviewing witnesses taking into account cultural and language differences (on-site and external);
- reviewing of documents, procedures and records;
- conducting specialised studies (as required);
- identifying conflicts in evidence;
- identifying missing information; and
- recording additional factors and possible underlying causes.

2.2.5.2 Following the fact-finding a typical marine casualty or incident investigation includes analysis of the facts, conclusions and safety recommendations.

2.2.6 Fact-finding

2.2.6.1 The objective of this stage of the investigation is to collect as many facts as possible which may help understanding of the incident and the events surrounding it. The scope of any investigation can be divided into five areas:

- people;
- environment;
- equipment;
- procedures; and
- organization.

2.2.6.2 Conditions, actions or omissions for each of these may be identified, which could be factors contributing to the incident or to subsequent injury, damage or loss.

2.2.6.3 During the initial stages of every investigation, investigators should aim to gather and record all the facts which may be of interest in determining causes. Investigators should be aware of the danger of reaching conclusions too early, thereby failing to keep an open mind and considering the full range of possibilities. With this in mind, it is recommended that the fact-finding stage of the investigation process itself be kept separate from the complete analysis of the collected evidence leading to conclusions and

recommendations, and that a structured methodology be adopted to ensure the effectiveness of that analysis. Having said that, the analysis may well help to identify missing pieces of evidence, or different lines of enquiry that may otherwise have gone undetected.

2.2.6.4 Investigation checklists can be very useful in the early stages to keep the full range of enquiry in mind, but they cannot cover all possible aspects of an investigation, neither can they follow all individual leads back to basic causal factors. When checklists are used, their limitations should be clearly understood.

2.2.6.5 The initial stages of an investigation normally focus on conditions and activities close to the incident and only primary causes, also called "active failures", are usually identified at this stage. However, conditions or circumstances underlying these causes, also called "latent failures", should also be investigated.

2.2.6.6 A factor to consider during an investigation is recent change. In many cases it has been found that some change occurred prior to an occurrence which, combining with other causal factors already present, served to initiate the occurrence. Changes in personnel, organisation, procedures, processes, and equipment should be investigated, particularly the hand-over of control and instructions, and the communication of information about the change to those who needed to know.

2.2.6.7 The effect of work cycles and work related stress could have an impact on individuals' performance prior to an occurrence. The impact of social and domestic pressures (so-called error enforcing conditions) related to individual's behaviour should not be overlooked.

2.2.6.8 Information should be verified wherever possible. Statements made by different witnesses may conflict and further supporting evidence may be needed. To ensure that all the facts are uncovered, the broad questions of "who?, what?, when?, where?, why?, and how?" should be asked.

2.2.7 Conducting interviews

2.2.7.1 An interview should start with the introduction of the interviewing party, the purpose of the investigation and of the interview, and the possible future use of the knowledge and material obtained during the interview. Investigators must be guided by the requirements of national law regarding the presence of legal advisers or other third parties during an interview.

2.2.7.2 People should be interviewed singly and be asked to go step-by-step through the events surrounding the occurrence, describing both their own actions and the actions of others. The interviewer should take into account the culture and language of the interviewee.

2.2.7.3 Notwithstanding any previously made written statements, the value of a witness's statement can be greatly influenced by the style of the interviewer, whose main task is to listen to the witness's story and not to influence him/her.

2.2.7.4 If the investigation is a team effort, great care must be taken not to make a witness feel intimidated by too many interviewers. Experience has shown that interviews can be effectively conducted by two interviewers and if appropriate, the witness could be accompanied by an independent "friend".

2.2.7.5 It should be remembered that an investigation team is often seen in a prosecuting role, and there may be reluctance to talk freely if people think they may incriminate themselves or their colleagues. An

investigator is not in the position to give immunity in return for evidence, but must try to convince interviewees of the purpose of the investigation and the need for frankness.

2.2.7.6 In addition to requiring both patience and understanding, successful interviewing requires the existence of a "no-blame" atmosphere in which the witness can be made to feel comfortable and is encouraged to tell the truth. It is not the role of the interviewer, or indeed the investigation team, to apportion blame. Their role is to establish the facts and to establish why the occurrence happened.

2.2.7.7 At the end of an interview the discussion should be summarised to make sure that no misunderstandings exist. A written record may be made of the interview and this may be discussed with the witness to clarify any anomalies. Subject to any national law, it may be possible to provide the interviewee with a copy of the written record.

2.2.8 Selection of interviewees

Established marine casualty and incident investigation procedures should be taken into account when determining whom to interview following a marine casualty. Safety concerns should be paramount in the scheduling of interviews.

The emphasis must always be to get the investigation team to the site of the occurrence as soon as possible and to interview those most closely involved, which in the marine sense will always be the ship first. When that is not possible due to external factors such as the geographical location of the occurrence or other political factors, it may be possible to nominate a local representative to carry out an interim investigation. From an investigation management point of view, it should still be possible to start the process by carrying out at least some of the interviews of individuals ashore.

It may not be possible to speak directly with port or pilotage authorities in some parts of the world. Where that is so then every effort should be made to obtain at least a transcript of the pilot's statement if one is involved. In the event of a collision in enclosed waters, evidence from the operators of shore based electronic surveillance equipment can be particularly useful.

There are no "hard and fast" rules for selecting who to interview and the following is offered as an example only:

2.2.8.1 On site (those nearest the incident)

Generally it is beneficial to begin the interview process with the ship management team including the master and chief engineer who typically can provide an overview of the occurrence.

- First hand witnesses present at the occurrence site at the time of the occurrence itself, regardless of rank/position in the organisation;
- First hand witnesses present at the occurrence site at the time of the occurrence itself, but from outside the organisation. Examples could be berthing or mooring assistants or visiting personnel such as agents or contractors;
- First hand witnesses present at the time of the occurrence but not at the occurrence location itself. Examples could be ship's staff on the bridge of a ship witnessing a mooring occurrence on the main deck below;

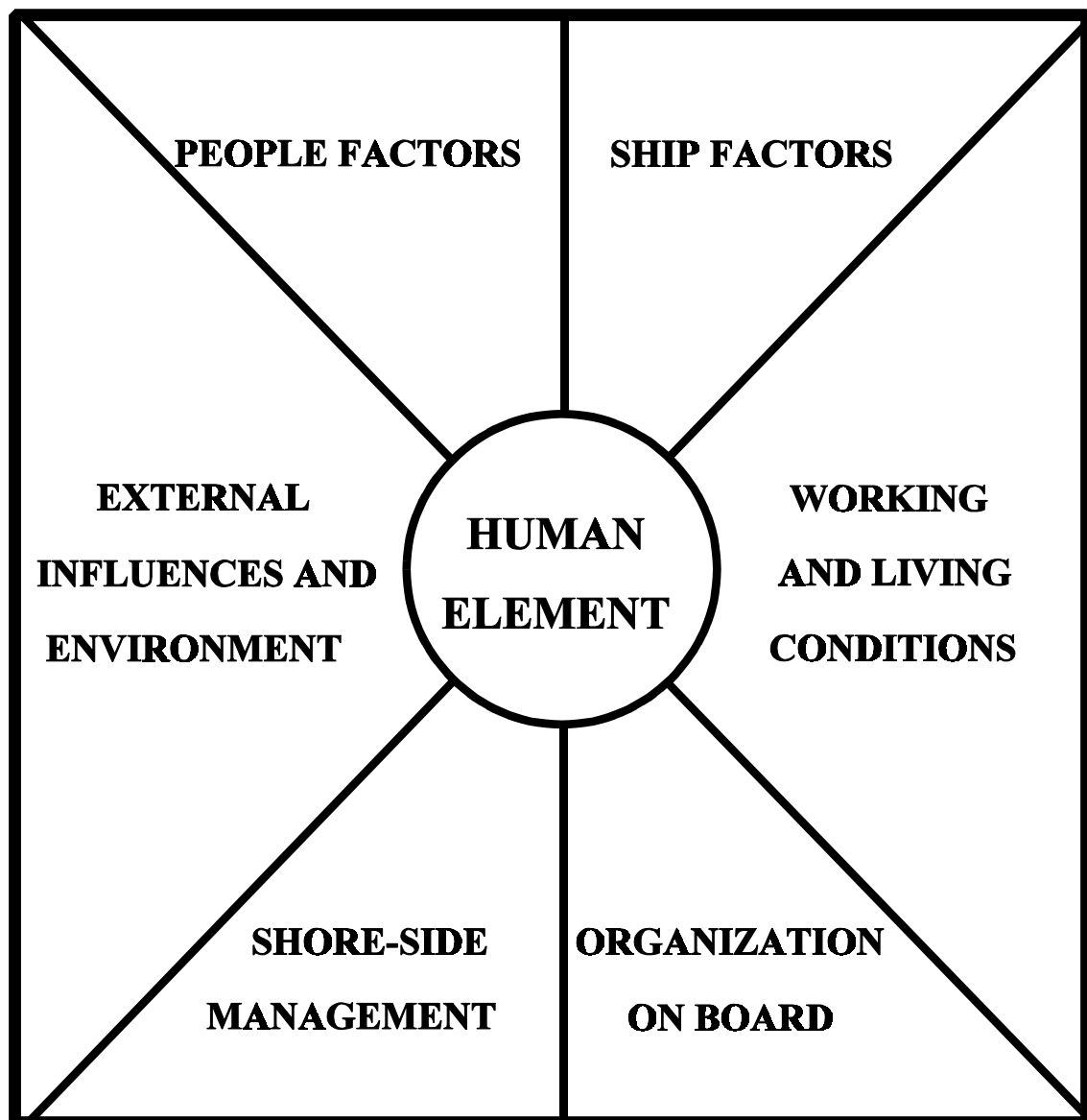
- First hand witnesses present at the time of the occurrence but not at the occurrence location itself and from outside the organization. Examples could be a pilot on the bridge witnessing a mooring occurrence on the main deck below;
- Those not involved with the occurrence itself but involved in the immediate aftermath of an occurrence especially those engaged in the recovery process. Examples could be those involved in damage control, shipboard fire-fighting or first-aid medical treatment;
- Tug, mooring boat or pilot cutter crews;
- Search & rescue personnel including helicopter crews;
- Shore-based fire-fighters;
- Jetty/terminal staff;
- Other vessels in the immediate vicinity; and
- Operators of Vessel Traffic Services (VTS) or monitoring systems.

2.2.8.2 Remote from occurrence site

- Designated person under the ISM Code;
- Ship operators ashore;
- Technical superintendents ashore;
- Company general managers ashore;
- Specialists consultants (relevant to the occurrence);
- Port State inspectors;
- Flag State inspectors;
- Regulatory authorities;
- Classification societies representatives;
- Safety committee members including crew representatives; and
- Designers, shipbuilders, manufacturers and repairers.

2.3 Topics to be covered by the investigator²

The diagram below shows a number of factors that have a direct or indirect impact on human behaviour and the potential to perform tasks.



The headings in the diagram are expanded below:

² Appendix 2 provides appropriate areas of inquiry and Appendix 3 provides definitions of common human element terms.

2.3.1 People factors

- ability, skills, knowledge (outcome of training and experience)
- personality (mental condition, emotional state)
- physical condition (medical fitness, drugs and alcohol, fatigue)
- activities prior to accident/occurrence
- assigned duties at time of accident/occurrence
- actual behaviour at time of accident/occurrence
- attitude

2.3.2 Organization on board

- division of tasks and responsibilities
- composition of the crew (nationality/competence)
- manning level
- workload/complexity of tasks
- working hours/rest hours
- procedures and standing orders
- communication (internal and external)
- on board management and supervision
- organization of on board training and drills
- teamwork including resource management
- planning (voyages, cargo, maintenance)

2.3.3 Working and living conditions

- level of automation
- ergonomic design of working, living and recreation places and equipment
- adequacy of living conditions
- opportunities for recreation

- adequacy of food
- level of ship motion, vibrations, heat and noise

2.3.4 Ship factors

- design
- state of maintenance
- equipment (availability, reliability)
- cargo characteristics including securing, handling and care
- certificates

2.3.5 Shore side management

- policy on recruitment
- safety policy and philosophy (culture, attitude and trust)
- management commitment to safety
- scheduling of leave periods
- general management policy
- port scheduling
- contractual and/or industrial arrangements and agreements
- assignment of duties
- ship-shore communication

2.3.6 External influences and environment

- weather and sea conditions
- port and transit conditions (VTS, pilots, etc)
- traffic density
- ice conditions
- organizations representing shipowners and seafarers
- regulations, surveys and inspections (international, national, port, classification societies, etc.)

2.4 Analysis

Once facts are collected, they need to be analyzed to help establish the sequence of events in the occurrence, and to draw conclusions about safety deficiencies uncovered by the investigation. Analysis is a disciplined activity that employs logic and reasoning to build a bridge between the factual information and the conclusions.

The first step in analysis is to review the factual information to clarify what is relevant, and what is not, and to ensure the information is complete. Thus, this process can give guidance to the investigator as to what additional investigation needs to be carried out.

In normal investigation practice, gaps in information that cannot be resolved are usually filled in by logical extrapolation and reasonable assumptions. Such extrapolation and assumptions should be identified and a statement of the measure of certainty provided.

Despite best efforts, analysis may not lead to firm conclusions. In these cases, the more likely hypotheses should be presented.

2.4.1 Fact-finding and analysis

After fact finding and analysis it should be possible to give a description of the occurrence, its background, timing, and the events leading to it.

The description should include such factual items as:

- the weather conditions;
- the operation(s) involved;
- the equipment in use, its capabilities, performance and any failures;
- the location of key personnel and their actions immediately before the incident;
- the pertinent regulations and instructions;
- uncontrolled hazards;
- changes of staff, procedures, equipment or processes that could have contributed to the occurrence;
- what safeguards were or were not in place to prevent the incident;
- response to the occurrence (first-aid, shut-down, fire-fighting, evacuation, search and rescue);
- medical treatment actions taken to mitigate the effects of the occurrence and the condition of injured parties, particularly if disabling injuries or death ensued;

- damage control including salvage;
- inventory of all consequences of the occurrence (injury, loss, damage or environmental damage); and
- general ship's condition.

It should also be possible to identify active and underlying factors such as:

- operational deviations;
- design aspects of hull structural failure;
- defects in resources and equipment;
- inappropriate use of resources and equipment;
- relevant personnel skill levels and their application;
- physiological factors (e.g. fatigue, stress, alcohol, illegal drugs, prescription medicine);
- why safeguards in place were inadequate or failed;
- role of safety programmes;
- problems relating to the effectiveness of regulations and instructions;
- management issues; and
- communication issues.

2.5 Safety action

2.5.1 The ultimate goal of a marine safety investigation is to advance maritime safety and protection of the marine environment. In the context of these guidelines, this goal is achieved by identifying safety deficiencies through a systematic investigation of marine casualties and incidents, and then recommending or effecting change in the maritime system to correct these deficiencies.

2.5.2 In a report that clearly lays out the facts relevant to the occurrence, and then logically analyzes those facts to draw reasoned conclusions including those relating to human factors, the required safety action may appear self-evident to the reader.

2.5.3 Recommended safety actions in whatever form should clearly identify what needs to be done, who or what organization is the agent of change, and, where possible, the urgency for completion.

3 REPORTING PROCEDURES

- 3.1 To facilitate the flow of information from casualty investigations, each report should conform to a basic format as outlined in IMO Assembly resolution A.849(20) - Code for the Investigation of Marine Casualties and Incidents.
- 3.2 Reports should be made to IMO in accordance with established procedures³.
- 3.3 Persons and/or organizations with a vested interest in a report should be given the opportunity to comment on the report or relevant parts thereof before the report is finalized.
- 3.4 The final report should be distributed to relevant parties involved and preferably be made public.

4 QUALIFICATIONS AND TRAINING OF INVESTIGATORS

- 4.1 Many and varied contributory factors can play a significant part in the events preceding a marine casualty or incident. The question of who should be charged with the responsibility for investigating and analysing human factors therefore becomes important. The skilled marine casualty and incident investigator generally is the person best suited to conduct all but the most specialized aspects of human factor investigation.
- 4.2 An investigator should have appropriate experience and formal training in marine casualty investigation. The formal training should include specific training in the identification of human factors in marine casualties and incidents.
- 4.3 In some cases, a human factors specialist may be of significant value in the investigation.

³ Refer to MSC/Circ.827-MEPC/Circ.333 of 9 December 1997 on reports on marine casualties and incidents.

APPENDIX 1

THE IMO/ILO PROCESS FOR INVESTIGATING HUMAN FACTORS

The following is a process that provides a step-by-step systematic approach for use in the investigation of human factors. The process is an integration and adaptation of a number of human factor frameworks - SHEL (Hawkins, 1987) and Reason's (1990) Accident Causation and generic error-modelling system (GEMS) frameworks, as well as Rasmussen's Taxonomy of Error (1987).

The process can be applied to both types of occurrences, i.e., accidents and incidents. The process consists of the following steps:

- .1 collect occurrence data;
- .2 determine occurrence sequence;
- .3 identify unsafe acts (decisions) and unsafe conditions;

and then for each unsafe act (decision),

- .4 identify the error type or violation;
- .5 identify underlying factors; and
- .6 identify potential safety problems and develop safety actions.

Steps 3 to 5 are useful to the investigation because they facilitate the identification of latent unsafe conditions. Step 6, the identification of potential safety problems is based extensively on what factors were identified as underlying factors. At times, an unsafe condition may be a result of a natural occurrence; in that case, the investigator may jump from Step 3 to Step 6. At other times, an unsafe act or decision may result from an unsafe condition which itself was established by a fallible decision; in such a case, the investigator should proceed through Steps 3 to 6.

Step 1 - Collect occurrence data

The first step in the human factors investigation process is the collection of work-related information regarding the personnel, tasks, equipment, and environmental conditions involved in the occurrence. A systematic approach to this step is crucial to ensure that a comprehensive analysis is possible and that the logistical requirements of collecting, organizing and maintaining a relevant occurrence related database are met.

For complex systems, where there are numerous interactions between the component elements, there is constant danger that critical information will be overlooked or lost during an investigation.

Use of the SHEL model as an organizational tool for the investigator's workplace data collections helps avoid downstream problems because:

- .1 it takes into consideration all the important work system elements;

- .2 it promotes the consideration of the interrelationships between the work system elements;
and
- .3 it focuses on the factors which influence human performance by relating all peripheral elements to the central liveware element.

At this step, the process initially attempts to answer the more simplistic questions concerning "what, who, and when" and then moves to more complicated questions of "how and why". The resulting data becomes, for the most part, a collection of events and circumstances comprised of acts and conditions. Some of these will be of interest as unsafe acts and unsafe conditions.

There are four components to the SHEL model:

Liveware - L

Hardware - H

Software - S

Environment - E.

The SHEL Model is commonly depicted graphically to display not only the four components but also the relationships, or interfaces, between the liveware and all the other components. Figure 1 attempts to portray the fact that the match or mismatch of the interfaces is just as important as the characteristics of the blocks themselves. A mismatch can be a source of human error and identification of a mismatch may be the identification of a safety deficiency in the system. Figure 2 also depicts how this model can be applied to a complex system where multiple liveware, hardware, software and environmental elements exist.

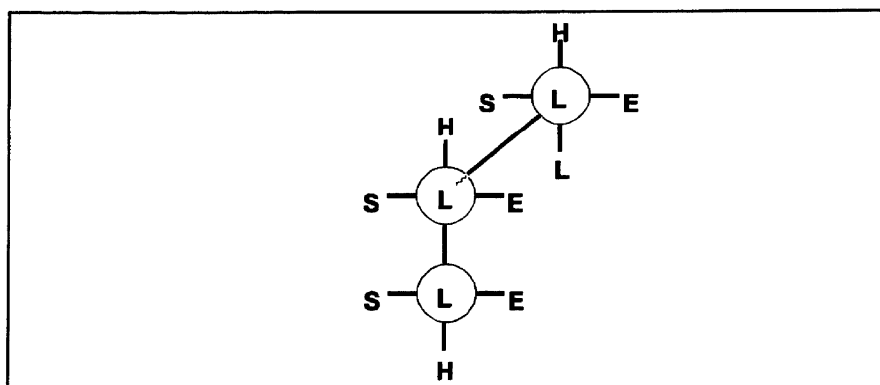


Figure 1.
(Adapted from Hawkins, 1987) SHEL Model

Liveware (central component)

The most valuable and flexible component in the system is the human element, the liveware, placed at the centre of the model. Each person brings his or her own capabilities and limitations, be they physical, physiological, psychological, or psychosocial. This component can be applied to any person involved with the operation or in support of the operation. The person under consideration interacts directly with each one of the four other elements. The person and each interaction, or interface, constitute potential areas of human performance investigation.

Liveware (peripheral)

The peripheral liveware refers to the system's human-human interactions, including such factors as management, supervision, crew interactions and communications.

Hardware

Hardware refers to the equipment part of a transportation system. It includes the design of work stations, displays, controls, seats, etc.

Software

Software is the non-physical part of the system including organizational policies, procedures, manuals, checklist layout, charts, maps, advisories and, increasingly, computer programs.

Environment

Environment includes the internal and external climate, temperature, visibility, vibration, noise and other factors which constitute the conditions within which people are working. Sometimes the broad political and economic constraints under which the aviation system operates are included in this element. The regulatory climate is a part of the environment in as much as its climate affects communications, decision making, control, and coordination.

Step 2 - Determine occurrence sequence

As the investigator moves to addressing questions of "how and why", there is a need to link the data identified in the first step of the process. Reason's (1990) model of accident causation, utilizing a production framework, can be used by an investigator as a guide to developing an occurrence sequence. As well, Reason's model facilitates further organization of the work system data collected using the SHEL model, and an improved understanding of their influence on human performance. The occurrence sequence is developed by arranging the information regarding occurrence events and circumstances around one of five production elements, i.e., *decision makers, line management, preconditions, productive activities, and defence*.

The production elements themselves are basically aligned in a temporal context. This temporal aspect is an important organizing factor since the events and circumstances that can lead to an accident or incident are not necessarily proximate in time, nor in location, to the site of occurrence. By establishing a sequential ordering of the data, Reason's (1990) concept of *active* versus *latent* factors is introduced.

Active factors are the final events or circumstances which led to an occurrence. Their effect is often immediate because they occur either directly in the system's defence (e.g., disabled warning system) or the site of the productive activities (i.e., the integrated activities of the work system's *liveware*, *software* and *hardware* elements), which would indirectly result in the breaching of the system's defence (e.g., use of the wrong procedure).

Underlying factors may reside at both the personal and the organizational levels; they may be present in the conditions that exist within a given work system (referring to the preconditions element in the model). Examples of *underlying factors* include inadequate regulations, inadequate procedures, insufficient training, high workload and undue time pressure.

In practice, Steps 1 and 2 may not be mutually exclusive. As the investigator begins the data collection step, it would be only natural that an attempt be made to place the information, albeit often fragmentary in the preliminary stages of an investigation, into the context of an occurrence sequence. To facilitate this concurrent activity, the SHEL and Reason models can be combined as illustrated in figure 2.

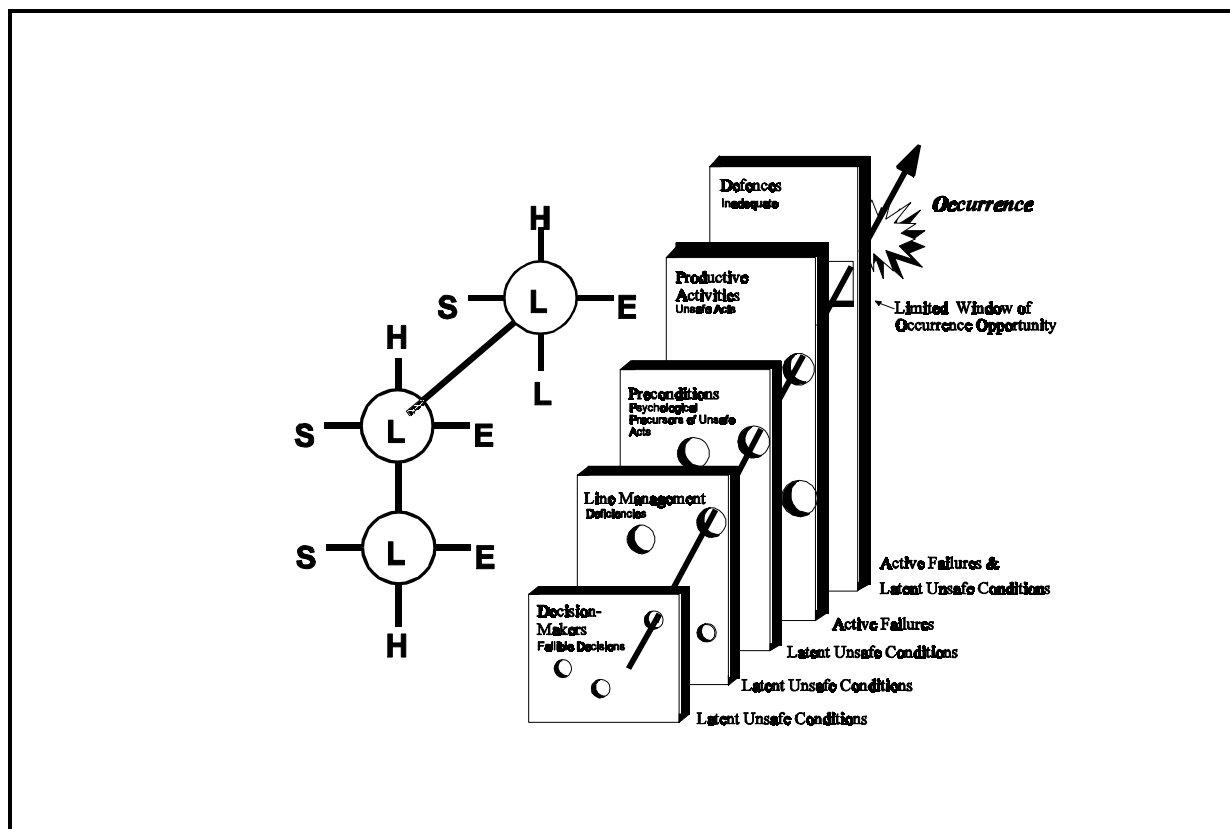


Figure 2.
SHEL and Reason Hybrid Model

The data collected during an investigation (i.e. events and circumstances) can be organized, using multiple components of the modified SHEL model, into a framework surrounding an occurrence template (in this case the occurrence scenario), based upon the Reason model. Causal factors, i.e. the unsafe acts/decisions and conditions are thereby identified.

Step 3 - 5 - An overview

Steps 3 to 5 are based upon the GEMS framework. The framework provides "pathways" that lead from the identification of the unsafe act/decision (Step 3) to the identification of what was erroneous about the action or decision (Step 4) and finally to its placement within a behavioural context (i.e., a failure mode within a given level of performance in Step 5). The GEMS framework illustrated in figure 3 is particularly useful in exploring hypothetical reconstructions of the occurrence facts.

Step 3 - Identify unsafe acts/decisions and conditions

In Step 3 of the process, the investigation takes on a reductionist nature where the information gathered and organized using the SHEL and Reason frameworks is used to initiate identification of occurrence causal factors, i.e., unsafe acts/decisions and conditions. An unsafe act is defined as an error or violation that is committed in the presence of a hazard or potential unsafe condition. Decisions, where there are no apparent resultant actions but which have a negative impact on safety, should also be considered as unsafe acts. An unsafe condition, or hazard as noted above, is an event or circumstance that has the potential to result in a mishap. There may be several acts, decisions and/or conditions which are potential unsafe candidates, thus necessitating iterative assessments of the occurrence facts. The SHEL and Reason hybrid tool (refer to figure 2) can provide a useful base for conducting such iterative assessments.

When an unsafe act, decision or condition is identified, the focus shifts to determining the genesis of that particular act or condition. Further investigation and/or analysis may reveal other unsafe acts/decisions or conditions antecedent to the causal factor that was initially identified.

As noted earlier, several unsafe acts and decisions may be identified throughout Steps 1 and 2 of the process. The last unsafe act precipitating the occurrence often provides a convenient starting point for reconstruction of the occurrence. This last act or decision differs from the others, in that, it can be viewed as the definitive action or decision which led to the occurrence, i.e., the last act or decision that made the accident or incident inevitable - **the primary cause of the initial event**. Although it is usually an active failure, the last unsafe act or decision can be embedded in a latent unsafe condition, such as a flawed design decision which led to a system failure.

Step 4 - Identify error or violation type

This portion of the process, i.e. Step 4, is initiated for each unsafe act/decision by posing the simple question "What is erroneous or wrong about the action or decision that eventually made it unsafe?".

The identification of the type of error or violation involves two sub-steps (see figure 3):

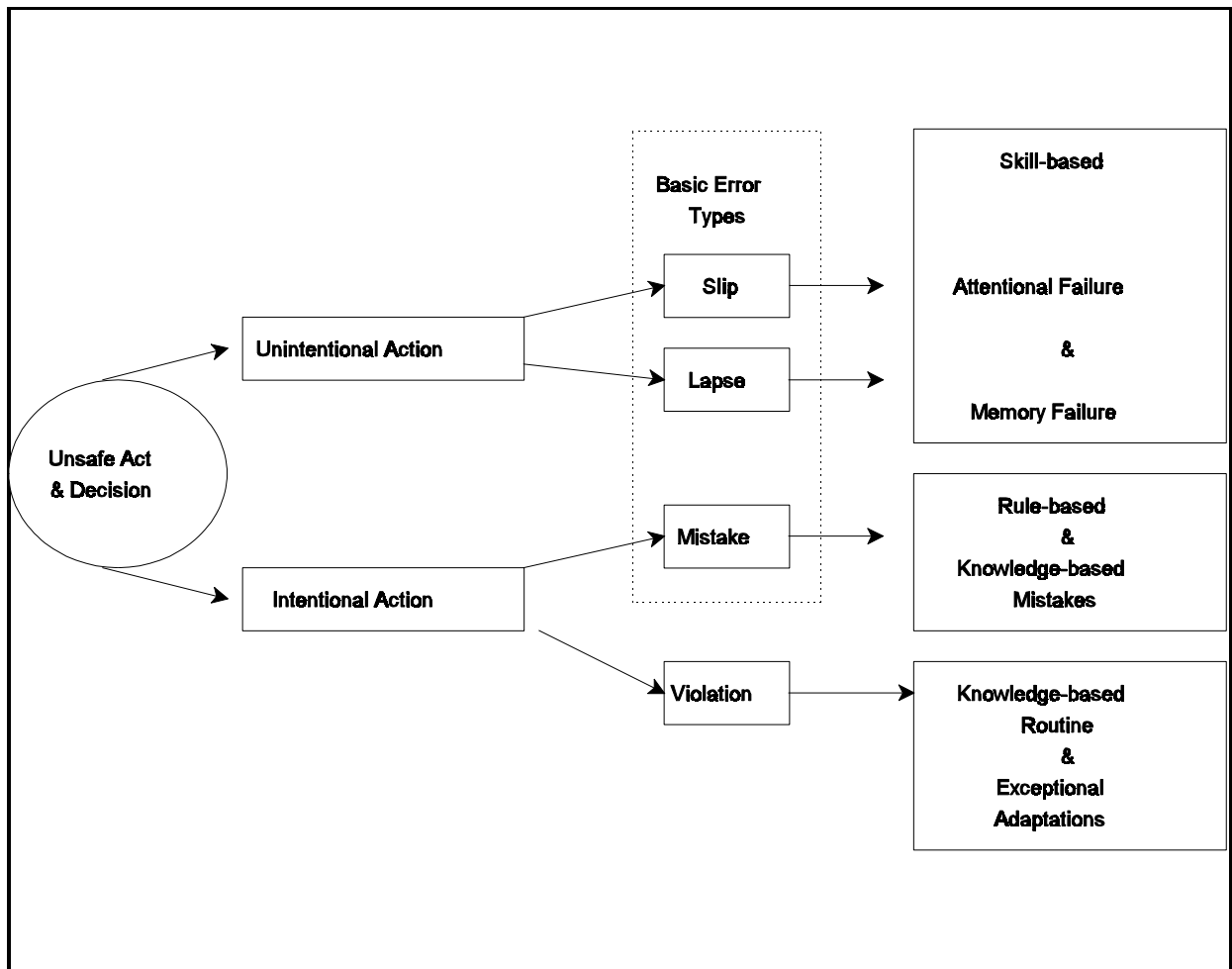


Figure 3.
The GEMS Framework
(Adapted from Reason, 1990)

The GEMS framework facilitates the linkage of an error/violation to an individual's level of performance at the time the failure occurred.

1) Unintentional or intentional action

First it is necessary to determine whether the error or violation was an unintentional or intentional action. "Did the person intend the action?" If the answer to that question is no, then it is an unintentional action. Unintentional actions are actions that do not go as planned; these are errors in execution.

If the answer to the question "Did the person intend the action?" is yes, then the action is intentional. Intentional actions are actions that are carried out as planned but the actions are inappropriate; these are errors in planning.

2) ***Error type or violation***

The second sub-step is the selection of the error type or violation that best describes the failure, keeping in mind the decision regarding intentionality. There are four potential error/violation categories, i.e., *slip*, *lapse*, *mistake* and *violation*. A *slip* is an unintentional action where the failure involves attention. These are errors in execution. A *lapse* is an unintentional action where the failure involves memory. These are also errors in execution. A *mistake* is an intentional action, but there is no deliberate decision to act against a rule or plan. These are errors in planning. A *violation* is a planning failure where a deliberate decision to act against a rule or plan has been made. Routine violations occur everyday as people regularly modify or do not strictly comply with work procedures, often because of poorly designed or defined work practices. In contrast, an exceptional violation tends to be a one-time breach of a work practice, such as where safety regulations are deliberately ignored to carry out a task. Even so, the goal was not to commit a malevolent act but just to get the job done.

Step 5 - Identify underlying factors

The designation of separate activities implied by Steps 4 and 5 may be somewhat arbitrary in terms of what actually occurs when an investigator attempts to reveal the relationship between the occurrence errors/violations and the behaviours that lead to them. In simplest terms, a behaviour consists of a decision and an action or movement. In Step 3, the action or decision (i.e., unsafe act or decision) was identified. In Step 4, what was erroneous regarding that action or decision was revealed. In Step 5, the focus is now placed on uncovering the underlying causes behind the act or decision of an individual or group. To do so it is important to determine if there were any factors in the work system that may have facilitated the expression of the given failure mode (and hence the error/violation and the unsafe act). These factors have been termed underlying factors. These factors can be found by examining the work system information collected and organized using the SHELL or Reason frameworks in Steps 1 and 2. The re-examination of these data again emphasizes the iterative nature of this investigative process where it may even be deemed necessary to conduct further investigations into the occurrence.

Step 6 - Identify potential safety problems and develop safety actions

The identification of potential safety problems is based extensively on what factors were identified as underlying factors. Once again this underscores the importance of the application of a systematic approach to Steps 1 and 2 of the process which sets the foundation for the subsequent analysis steps. Where appropriate, the potential safety problems can be further analysed to identify the associated risk to the system and to develop safety actions.

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APPENDIX 2

AREAS OF HUMAN FACTORS INQUIRY

The following questions are designed to aid the investigator while investigating for human factors. Skilful questioning can help the investigator eliminate irrelevant lines of inquiry and focus on areas of greater potential significance.

The order and manner in which the questions should be asked will depend on who is being interviewed and on his or her willingness and ability to describe personal behaviour and personal impressions. Also, it may be necessary to verify, cross-check or augment information received from one person by interviewing others on the same points.

These areas of inquiry can be used in planning interviews. The following questions are not meant to be exhaustive, or be used as a checklist, and some may not be relevant in the investigation of a particular accident. As new human factors issues emerge, new areas of inquiry will need to be explored by investigators.

SHIPBOARD ISSUES

1 Safety policy

- .1 Does the company have a written safety policy?
- .2 Is there a designated person for shipboard safety matters in the company?
- .3 When did a company representative last visit the vessel or when were you last in contact with the company?
- .4 When were you last provided safety training? What was the training and how was it provided?
- .5 When was the last emergency drill (e.g., fire, abandon ship, man-overboard, pollution response, etc) and what did you do during the drill?
- .6 Was appropriate personal protective equipment provided and did you use it?
- .7 Are you aware of any personal accidents which occurred on board in the period prior to the accident?

2 Activities prior to incident

- .1 (If the ship was leaving port at the time of the accident) In general, how did you spend your time while the ship was in port?
- .2 (If the ship was approaching port or at sea at the time of the accident) How long has the ship been on passage since its last port or terminal operation?
- .3 What were you doing immediately prior to coming on watch or reporting for duty, and for how long? Recreational activity? Physical exercise? Sleeping? Reading? Watching television? Eating? Paperwork? Travelling to vessel?
- .4 Specifically what were you doing approximately 4 h, 1 h, 30 min before the accident?

- .5 What evolution was the ship involved in when the accident occurred? What was your role during that evolution?
- .6 Immediately prior to the accident, what were you thinking about?
- .7 At any time before the accident, did you have any indication that anyone was tired or unable to perform their duty?

3 Duties at the time of accident

- .1 Where were you on the ship when the accident occurred?
- .2 What specific job or duty were you assigned at the time? By whom? Did you understand your assignment? Did you receive any conflicting orders?
- .3 How often have you performed this job in the past (on the specific ship involved in the accident)?

4 Actual behaviour at time of accident

- .1 Precisely where were you located at the time of the accident?
- .2 What specific task were you performing at the time of the accident?
- .3 Had you at any time since reporting for duty found that you could not concentrate (focus your attention/keep your mind) on a task you were trying to perform?

5 Training/education/certification/professional experience

- .1 How long have you been assigned to this ship? Have you requested that your assignment be lengthened or shortened?
- .2 How long have you filled your crew position? What other crew positions have you held on this ship?
- .3 How long have you held the certificate indicating your qualifications?
- .4 Before being assigned to this ship, did you work on other ships? If so, what crew positions have you held?
- .5 What is the longest time you have been to sea in a single voyage? How long have you been at sea on this passage? What was your longest single passage?

6 Physical condition

- .1 Were you feeling ill or sick at any time in the 24 hours immediately before the accident? If so, what symptoms did you have? Did you have a fever, vomit, feel dizzy, other? Also, did you tell anyone? What do you believe the cause was?
- .2 When was the last meal you had prior the accident? What did you eat? Was it adequate?
- .3 Do you exercise regularly while onboard? When did you last exercise (before the accident)? How long was the session?

7 Psychological, emotional, mental condition and employment conditions

- .1 When was the last time you felt cheerful or elated onboard the ship, and what were the circumstances that generated this emotion?
- .2 When was the last time you were sad or depressed or dejected, on board the ship? Why? Did you talk about it with anyone else?

- .3 Have you had to make any difficult personal decisions recently? Have you had any financial or family worries on your mind recently?
- .4 Have you been criticized for how you are doing your work lately? By whom? Was it justified?
- .5 What was the most stressful situation you had to deal with on the voyage (prior to the accident)? When did the situation occur? How was it resolved?
- .6 What are the contractual arrangements for all crew members?
- .7 Have there been any complaints or industrial action in the last (12) months?

8 Workload/complexity of tasks

- .1 What is the shipboard organization?
- .2 Is the shipboard organization effective?
- .3 What is your position in the shipboard organization (i.e., who do you work for, report to or assign duties to)?
- .4 What is the nature of your work? Sedentary? Physically demanding?
- .5 Was anyone involved in the accident impaired due to heavy workload?

9 Work-period/rest-period/recreation pattern

- .1 What is your normal duty schedule?
- .2 Are you a day worker or a watchkeeper?
- .3 What was your duty schedule on the day before the accident and during the week before the accident?
- .4 Were you on overtime at the time of the accident?
- .5 How long had you been on duty, or awake performing other work, at the time of the accident?
- .6 When was your last period of sleep? How long did it last? How often did you awaken during your last sleep period? Did you awaken refreshed? If not, what would have made your sleep period more restful?
- .7 How do you normally spend your off-duty time while on board? Play cards? Read? Listen to music? Watch television? Other?
- .8 When was your last extended period of off duty time when you were able to rest?

10 Relationship with other crew members and superiors/subordinates

- .1 Who among the crew would you consider to be a friend?
- .2 Do you find any members of the crew unpleasant to be with?
- .3 Do you have difficulty talking with any of the crew members because of language barriers?
- .4 Have any new crew members recently joined the ship? Have you had a chance to get acquainted with them?
- .5 Did you have any argument recently with another crew member?
- .6 In an emergency, would you trust your fellow crew members to come to your assistance?
- .7 Has another crew member ever offered to take your place on watch or perform a duty for you to let you get some extra rest?
- .8 What was the subject of your last conversation with another crew member before reporting for duty (when the accident occurred)?

- .9 Have you talked with any other crew members since the accident? If so, what was the subject of your conversation? Have you talked with anyone else about the accident prior to being interviewed?

11 Living conditions and shipboard environment

- .1 Do you consider your personal area on board the ship to be comfortable? If not, how would you like it to improved?
.2 Prior to the accident, did you have any difficulty resting as a result of severe weather, noise levels, heat/cold, ship's motion, etc.?

12 Manning levels

Is the manning level sufficient in your opinion for the operation of the vessel?

13 Master's standing orders

- .1 Are there written standing orders to the whole crew complement from the master?
.2 Did the master/chief engineer provide written or verbal standing orders to the watchkeeping personnel?
.3 Were the orders in conflict with the company safety policy?

14 Level of automation/reliability of equipment

- .1 In your opinion, was the system reliable?
.2 Were there earlier failures in the system?
.3 Were the failures repaired by the crew or shore-based workers?

15 Ship design, motion/cargo characteristics

Did you observe anything out of the ordinary on this passage concerning the ship design, or motion or cargo characteristics?

SHORESIDE MANAGEMENT ISSUES

16 Scheduling of work and rest periods

What is the company's work schedule and relief policy?

17 Manning level

How is the manning level determined for your fleet?

18 Watchkeeping practices

- .1 Do you require the master to stand watch?
- .2 Do you leave the watchkeeping practices to the discretion of the master?

19 Assignment of duties

Do you leave this matter to the master?

20 Shore-ship-shore support and communications

How do you support the ship's master?

21 Management policies

Does the company have a written safety policy?

22 Voyage planning and port call schedules

How does the master plan the voyages?

23 Recreational facilities

Are welfare/recreational services and facilities provided on board?

24 Contractual and/or industrial arrangements and agreements

- .1 What are the contractual agreements for all crew members?
- .2 Have there been any complaints or industrial action in the last (12) months?

25 National/international requirements

Are the management/master complying with the requirements and recommendations of the applicable international conventions and flag State regulations?

APPENDIX 3

DEFINITIONS COMMON HUMAN ELEMENT TERMS

Human error: A departure from acceptable or desirable practice on the part of an individual or group of individuals that can result in unacceptable or undesirable results.

Diminished human performance:

Emotional: A physiological state of agitation or disturbance which can affect an individual's normal ability to perform required tasks.

Panic: A sudden overpowering fear that reduces the ability to perform required tasks.

Anxiety: A state of uneasiness and distress about future uncertainties which may reduce the ability to properly focus on a required task.

Personal problem: A problem which preoccupies the emotions and reduces the ability to perform required tasks. Examples include physical disabilities, death or illness in the family, marital and other relationship problems, health concerns, financial problems, anger, or poor interactions with shipmates.

Mental impairment: Diminished mental ability that can reduce or impede an individual's normal ability to perform the mental part of required tasks.

Alcohol use: Consumption of alcoholic beverages which diminishes an individual's abilities to perform required tasks. Examples include drinking on or too close to duty which can impede an individual's abilities; drunkenness on duty; drinking off duty which results poor performance while on duty; and excessive drinking over a longer period of time which results in a permanent decrease in mental abilities.

Drug use: Use of medicine or a narcotic which effects an individual's abilities to perform required tasks. There are many different effects on mental and physical capabilities that can result from the use of legal and illegal drugs, such as extreme drowsiness to a false sense of competence to hallucinations. Mental abilities of the user may also be distracted by the constant need to obtain additional drugs. In addition, individuals may not be aware of the "side-effects" of legal drugs and may take them while on duty or forget to report taking them.

Inattention: The loss of attention, notice or regard; neglect. Examples include failing to monitor displays; not maintaining a proper lookout; forgetting to perform an assigned duty. Inattention may also be the result of other causes such as a personal problem, fatigue, drugs, boredom, or hearing problems.

Injury: Physical damage to the body which causes a decrease in mental or physical abilities. Examples include a head injury and injuries such as a smashed finger or a severe burn where pain causes distraction and a loss of mental ability.

Mental illness:	Psychotic or erratic behaviour; depression; hallucinations; unexplainable or other forms of abnormal behaviour.
Physical illness:	Sickness which produces a decrease in mental or physical abilities but, not generally termed as mental illness. Examples include: the general disability accompanying colds and flu; hallucinations due to high fever; migraine headaches; seasickness and even severe indigestion and exposure to toxic substances.
Diminished Motivation:	Lack of will or desire to perform well resulting in a decrease of an individual's normal performance of required tasks.
Deliberate misaction:	Purposely taking an incorrect action or purposely failing to take the correct action. Examples include dereliction of duty; refusal to obey commands; sabotage, theft or ignoring procedures.
Fatigue:	A reduction in physical and/or mental capability as the result of physical, mental or emotional exertion which may impair nearly all physical abilities including: strength; speed; reaction time; co-ordination; decision making, or balance.
Low morale:	A problem with individual or group motivation as shown by reduced willingness, confidence or discipline to perform assigned tasks. Examples/causes may include interpersonal conflict amongst the crew, officers with poor interpersonal skills, lack of a strong corporate or shipboard safety culture; excessively long tours of duty.
Lack of self-discipline:	Inadequate ability of an individual to control personal conduct. Examples include loss of temper or unprofessional behaviour.
Visual problem:	A reduced visual acuity due to a specific physical disability. Causes may include eye injury causing total or partial blindness; not wearing prescribed glasses or contacts; inability to adequately adapt to darkness.
Excessive workload:	Diminished physical or mental capability as the result of the sum total of all the mental and physical tasks a human must perform within a prescribed time resulting in a diminished job performance.

Marine environment:

Hazardous natural environment:	A situation in which the natural environment causes required tasks to become more difficult than usual. Examples include storms; high waves; shallow water; severe shoaling; strong currents or tides; ice, rocks, submerged wrecks, severe eddies, ship traffic, wind; fog; mist; rain; snow; sleet; haze; dust; airborne debris.
Poor human factors design:	Poor design of the ships, its subsystems, its environmental controls, engineering or its human-machine interfaces, which results in an increased difficulty to perform shipboard tasks. Examples of poor human factors engineering design include inadequate lighting; excessive noise; excessive vibration; inadequate heating, cooling, or ventilation systems; hazardous deck stair, ladder, bulkhead,

or work surfaces; inadequate provision for foul weather or degraded mode operations; inadequate restraints, guards, or hand-holds; poor workstation orientation in regard to ship dynamics; poor hull seakeeping characteristics; controls which allow accidental actuation; illegible or ambiguous control markings; illegible or ambiguous displays or display labels; poor layout, sizing, and colouring of controls and displays; inadequate design for operational or maintenance access; inadequate design for safety.

Poor operations: A situation in which individuals or groups of individuals degrade the shipboard environment making the performance of some required tasks more difficult. Examples include ship manoeuvres (e.g. increased speed, change in course, erratic manoeuvres) impact ship dynamics causing balance and restraint difficulties, when personnel performing one task interfere with those performing another; or where storage of cargo impedes access or transit.

Poor maintenance: Failure to keep any part of the ship or its equipment in the condition it was designed to function within a designated lifetime or operational period, thus degrading the shipboard environment and making the performance of some required tasks more difficult. Examples of poor maintenance impacting on required tasks are: inadequate replacement parts, tools to perform proper maintenance that are the result of a lack of commitment from management.

Safety administration:

Inadequate technical knowledge: Not having, due to inadequate experience and/or training, the general knowledge which is required for the individual's job on board. Examples are navigation, seamanship, propulsion systems, cargo handling, communications, or weather.

Inadequate situational communication/awareness: Not knowing, due to inadequate experience, lack of communication, co-ordination and/or training the current status of the ship, its systems, or its environment. Examples include lack of knowledge of location, heading or speed or lack of knowledge of status of ongoing maintenance on board.

Lack of communication or co-ordination: Not making use of all the available information sources to determine current status. This may be the result of a lack of initiative on the part of the individual or a lack of initiative and/or cooperation on the part of others. Examples of poor communication/co-ordination include: poor communication between bridge officers, poor communication with pilots, or poor deck to engine room co-ordination.

Inadequate knowledge of ship operations: Lack of knowledge resulting from inadequate experience, a failure to know regulations, an inadequate knowledge of procedures, inadequate training, and/or being unaware of your role/task responsibility. Examples of areas where you might lack knowledge are: navigation, seamanship, propulsion systems, cargo handling, communications, or weather.

Inadequate knowledge of regulations/standards: Lack of knowledge or understanding of required regulations due to inadequate experience and/or training. Examples of possible regulations; company policies and standards, national and international regulations, other port State's maritime regulations, local jurisdiction regulations, shipboard regulations, cautionary notices, chart notations, or labelling.

Inadequate knowledge of ship procedures: Not knowing due to inadequate experience and/or training the shipboard and company policies requiring adequate knowledge of your own ship's operation. Examples include emergency procedures, maintenance procedures, administrative procedures, and safety system procedures.

Unaware of role/task responsibility: Inadequate knowledge of the specific job required of an individual. Examples include a lack of understanding of command responsibilities, communications responsibilities, safety responsibilities, maintenance responsibilities and emergency responsibilities.

Inadequate language skills: A lack of primary language skills necessary to communicate and perform duties as required. This includes total or partial inability to speak, read or comprehend the primary language and/or other required language sufficiently to understand all shipboard commands, instructions, procedures, labels, warnings and regulations.

Management:

Failure to maintain discipline: Failing to ensure that personnel submit to authority, regulations and procedures. Examples include: tolerating unqualified or inept personnel, not enforcing regulations and procedures, tolerating inappropriate in subordination.

Failure of command: Mistakes in giving commands. Examples of faulty command include: proper command not given, proper command not given at the appropriate time or out of sequence with other commands, incorrect commands, conflicting commands.

Inadequate supervision: Inadequate oversight of activities of personnel under an individual's supervision. Examples of faulty supervision include: not checking to see that a job was performed in a timely and correct manner, not providing proper resources to problems brought to the attention of supervising individual, unequal treatment of personnel.

Inadequate co-ordination or communication: Failure to communicate and coordinate to address issues, problems and tasks both aboard ship and ashore. Examples include: poor communication between bridge officers, poor communication with pilots, poor communication with home office, poor deck to engine room co-ordination.

Inadequate management of physical resources: Poor management of physical resources which ensure that people have the tools, equipment, supplies, facilities, food, water, fuel, etc. to perform their required tasks. Examples of faulty management of physical resources include: absence of physical resources, shortage of physical resources, inappropriate physical resources, physical resources stored improperly, physical resource difficult to obtain when needed.

- Inadequate manning:** Failing to ensure that all required tasks aboard ship can be properly performed and that adequate personnel of the proper skill level, physical and mental ability, experience, certification, and inclination to properly perform those tasks.
- Inadequate manpower available:** Not assigning and assuring availability of adequate personnel with appropriate skill levels to a ship, or to a specific task aboard the ship to ensure safe and efficient operation.
- Poor job design:** Specifying job or task requirements which are unreasonable, inefficient, impossible, excessive, or impractical. Examples include: excessive watch duration or frequency, requiring a single person to simultaneously monitor displays that are spastically separated, requiring exposure to hazardous materials without proper protective gear.
- Poor regulations, policies, procedures or practices:** Any problem with standards, regulations, policies, procedures or practices. For example: standards, regulations, policies, procedures, or practices may be conflicting, inaccurate, inadequate, do not provide sufficient detail, or outdated.
- Misapplication of good regulations, policies, procedures or practices:** The application of standards, regulations, policies, procedures, or practices at an incorrect time or in an inappropriate circumstance.

Mental action:

- Lack of situational awareness:** An incorrect understanding of the current situation which can lead to a faulty hypothesis regarding a future situation or a situation which is based upon incorrect beliefs leading to compounded errors that can substantially increase the risk to the ship. Examples include arriving at a hypothesis without confirmation of which direction an oncoming ship will steer, incorrect interpretation of alarms on board ship (e.g. seawater contamination of a fuel system during high seas).
- Lack of perception:** When an individual does not properly understand that a problem or situation exists. Examples include misreading a dial, mishearing a command, misunderstanding a garbled radio message, thinking you smell engine oil when it's actually crude, not noticing a list to starboard, overestimating the distance to the dock.
- Incorrect recognition:** The misdiagnosis of a particular situation or problem once it has been perceived. It may be perceived that a problem or situation exists, however, the identification is incorrect. Examples include misdiagnosis of a sounded alarm that sounds similar to other alarms on board ship, incorrect recognition of a visual display alarm on the bridge.
- Incorrect identification:** The incorrect identification of a problem or hazard once it has been recognized that the problem or hazard exists. The alarms on a display panel may have identified a particular hazard to the ship (e.g. low fuel oil pressure), however, the individual may have misinterpreted the alarm and identified the problem incorrectly.

APPENDIX 4

SELECTED BIBLIOGRAPHY OF UNCLOS/ILO/IMO REQUIREMENTS AND RECOMMENDATIONS RELATED TO INVESTIGATION OF HUMAN FACTORS IN MARINE CASUALTIES AND INCIDENTS

UNITED NATIONS CONVENTION ON THE LAW OF THE SEA

Article 94, *Duties of the flag State*, provides, in paragraph 7:

Each State shall cause an inquiry to be held by or before a suitably qualified person or persons into every marine casualty or incident of navigation on the high seas involving a ship flying its flag and causing loss of life or serious injury to nationals of another State or serious damage to ships or installations of another State or to the marine environment. The flag State and the other State shall co-operate in the conduct of any inquiry held by that other State into any such marine casualty or incident of navigation.

ILO (INTERNATIONAL LABOUR ORGANIZATION) CONVENTIONS AND RECOMMENDATIONS

Merchant Shipping (Minimum Standards) Convention, 1976 (No. 147)

Article 2 provides:

Each Member which ratifies this Conventions undertakes” “(g) to hold an official inquiry into any serious marine casualty involving ships registered in its territory, particularly those involving injury and/or loss of life, the final report of such inquiry normally to be made public.”

Prevention of Accidents (Seafarers) Convention, 1970 (No. 134)

Article 2 provides:

- 1. The competent authority in each maritime country shall take the necessary measures to ensure that occupational accidents are adequately reported and investigated, and comprehensive statistics of such accidents kept and analyzed.*
- 2. All occupational accidents shall be reported and statistics shall not be limited to fatalities or to accidents involving the ship.*
- 3. The statistics shall record the numbers, nature, causes and effects of occupational accidents, with a clear indication of the department on board ship - for instance, deck, engine or catering - and of the area - for instance, at sea or in port - where the accident occurred.*
- 4. The competent authority shall undertake an investigation into the causes and circumstances of occupational accidents resulting in loss of life or serious personal injury, and such other accidents as may be specified in national laws or regulations.*

Article 3 provides:

In order to provide a sound basis for the prevention of accidents which are due to particular hazards of maritime employment, research shall be undertaken into general trends and into such hazards as are brought out by statistics.

Article 9 provides, in paragraph 2:

All appropriate and practical measures shall also be taken to bring to the attention of seafarers information concerning particular hazards, for instance by means of official notices containing relevant instructions.

Prevention of Accidents (Seafarers) Recommendation, 1970 (No. 142)

Paragraph 3 provides:

Subjects to be investigated in pursuance of Article 3 of the Prevention of Accidents (Seafarers) Convention, 1970, might include -

- (a) working environment, such as working surfaces, layout of machinery and means of access and lighting, and methods of work;*
- (b) incidence of accidents in different age groups;*
- (c) special physiological or psychological problems created by the shipboard environment;*
- (d) problems arising from physical stress on board ship, in particular as a consequence of increased workload;*
- (e) problems arising from and effects of technical developments and their influence on the composition of crews;*
- (f) problems arising from any human failures such as carelessness.*

Dissemination of information to shipowner and seafarers

In addition to the provisions referred to above, Convention No. 134 also includes provisions concerning the responsibility of the competent authority to disseminate information gained from accident investigations and research and to bring it to the attention of shipowners and seafarers. The competent authority also has the responsibility to promote and ensure the training of seafarers in the prevention of accidents and in to take measures for their health and protection. Recommendation No. 142 provides further guidance on these subjects.

IMO (INTERNATIONAL MARITIME ORGANIZATION) CONVENTIONS

International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended

Regulation I/21, Casualties, provides:

(a) *Each Administration undertakes to conduct an investigation of any casualty occurring to any of its ships subject to the provisions of the present Convention when it judges that such an investigation may assist in determining what changes in the present regulations might be desirable⁴.*

(b) *Each Contracting Government undertakes to supply the Organization with pertinent information concerning the findings of such investigations. No reports or recommendations of the Organization based upon such information shall disclose the identity or nationality of the ships concerned or in any manner fix or imply responsibility upon any ship or person.*

International Convention on Load Lines, 1966

Article 23, Casualties, provides:

(1) *Each Administration undertakes to conduct an investigation of any casualty occurring to ships for which it is responsible and which are subject to the provisions of the present Convention when it judges that such an investigation may assist in determining what changes in the Convention might be desirable.*

⁴ Refer to the following resolutions adopted by the Organization:

- A.203(VII) - Recommendation on the conclusion of agreements and arrangements between States on the question of access and employment of foreign seaborne salvage equipment in territorial waters
- A.322(IX) - The conduct of investigation into casualties
- A.442(XI) - Personnel and material resource needs of Administrations for the investigation of casualties and contravention of conventions

Refer also to:

- MSC/Circ.70/Rev.1 Questionnaire on the maritime distress system
- MSC/Circ.224 Submission of damage cards and intact stability casualty records
- MSC/Circ.388 Fire casualty records
- MSC/Circ.433 Reports on investigations into serious casualties
- MSC/Circ.539/Add.2 Reports on casualty statistics concerning fishing vessels and fishermen at sea
- MSC/Circ.559 Guidelines to ensure the reporting to the Organization of incidents involving dangerous goods and marine pollutants in packaged form on board ships and in port areas
- MSC/Circ.621 Guidelines for the investigation of accidents where fatigue may have been a contributing factor

- (2) *Each Contracting Government undertakes to supply the Organization with the pertinent information concerning the findings of such investigations. No reports or recommendations of the Organization based upon such information shall disclose the identity or nationality of the ships concerned or in any manner fix or imply responsibility upon any ship or person.*

International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78)

Article 8, Reports on incidents involving harmful substances, provides:

- (1) *A report of an incident shall be made without delay to the fullest extent possible in accordance with the provisions of Protocol I to the present Convention.*
- (2) *Each Party to the Convention shall:*
 - .1 *make all arrangements necessary for an appropriate officer or agency to receive and process all reports on incidents; and*
 - .2 *notify the Organization with complete details of such arrangements for circulation to other Parties and Member States of the Organization.*
- (3) *Whenever a Party receives a report under the provisions of the present article, that Party shall relay the report without delay to:*
 - .1 *the Administration of the ship involved; and*
 - .2 *any other State which may be affected.*
- (4) *Each Party to the Convention undertakes to issue instructions to its maritime inspection vessels and aircraft and to other appropriate services, to report to its authorities any incident referred to in Protocol I to the present Convention. That Party shall, if it considers it appropriate, report accordingly to the Organization and to any other Party concerned.*

Article 12, Casualties to ships, provides:

- (1) *Each Administration undertakes to conduct an investigation of any casualty occurring to any of its ships subject to the provisions of the Regulations if such a casualty has produced a major deleterious effect upon the marine environment.*
- (2) *Each Party to the Convention undertakes to supply the Organization with information concerning the findings of such investigation, when it judges that such information may assist in determining what changes in the present Convention might be desirable.*

IMO ASSEMBLY RESOLUTIONS

Assembly resolution A.849(20) - Code for the Investigation of Marine Casualties and Incidents

ADOPTS the Code for the Investigation of Marine Casualties and Incidents;
INVITES all Governments concerned to take appropriate measures to give effect to the annexed Code as soon as possible;
REQUESTS flag States to conduct an investigation into all very serious and serious marine casualties and to report all relevant findings to the Organization;
REVOKES resolutions A.173(ES.IV), A.440(XI) and A.637(16).

Assembly resolution A.850(20) - Human element vision, principles and goals for the Organization

ADOPTS the human element vision, principles and goals for the Organization;
INVITES Governments to bring this resolution to the attention of their representatives who attend meetings of the Organization for appropriate action, and to encourage those responsible for the operation and design of ships to take the relevant principles into account when making design and operational decisions;
REQUESTS the Maritime Safety Committee and the Marine Environment Protection Committee to consider proposals for new or revised instruments of procedures relating to safety of life at sea or protection of the marine environment taking into account the annexed human element vision, principles and goals;
REQUESTS ALSO the Maritime Safety Committee and the Marine Environment Protection Committee to keep the annexed vision, principles and goals under review and take action as appropriate.

IMO MARITIME SAFETY COMMITTEE CIRCULARS

MSC/Circ.621 - Guidelines for the investigation of accidents where fatigue may have been a contributing factor

MSC/Circ.621, prepared by a Joint ILO/IMO Group of experts on fatigue, which finished its work in March 1993, provides guidance to those involved in determining whether, and to what extent, fatigue may have contributed to a maritime casualty or accident. The Guidelines cover such topics as investigator qualifications and training, criteria for selecting whom to interview and the sequence of interviews, and topics to be covered by the investigator. The Guidelines include forms for recording information for analysis at the national and international level.

MSC/Circ.827 - MEPC/Circ.333 - Harmonized reporting procedures - Reports required under SOLAS 74 regulation I/21 and MARPOL 73/78 articles 8 and 12

IMO CODE

Code for the Investigation of Marine Casualties and Incidents (resolution A.849(20))

The Code aims to promote a common approach to the safety investigation of marine casualties and incidents and to also promote cooperation between States in identifying the contributing factors leading to marine casualties. It provides that the result of a common approach and co-operation will be to aid remedial action and to enhance the safety of seafarers and passengers, and the protection of the marine environment. In achieving these aims, the Code recognises the need for mutual respect for national rules and practices and puts particular emphasis upon co-operation.

The Code further provides that the objective of any marine casualty investigation is to prevent such casualties in the future. Investigations identify the circumstances of the casualty under investigation and establish the causes and contributing factors, by gathering and analysing information and drawing conclusions. Ideally, it is not the purpose of such investigations to determine liability, or apportion blame. However, the Investigating Authority should not refrain from fully reporting the causes because fault or liability may be inferred from the findings.

The Code covers such topics as conduct of marine casualty investigations, responsibility to investigate casualties and incidents, responsibilities of the lead investigating State, consultation, co-operation (among States), disclosure of records, personnel and material resources, the issue of marine casualty reports and submission to IMO, the re-opening of investigations, contents of reports and contact between Administrations."

ANNEX 13**DRAFT ASSEMBLY RESOLUTION****AMENDMENTS TO THE PROCEDURES FOR PORT STATE CONTROL
(RESOLUTION A.787(19))**

THE ASSEMBLY,

RECALLING Article 15(j) of the Convention on the International Maritime Organization concerning the functions of the Assembly in relation to regulations and guidelines concerning maritime safety and the prevention and control of marine pollution from ships,

RECALLING ALSO resolution A.787(19) by which it adopted the procedures for port State control,

RECALLING FURTHER that, at its nineteenth session, when adopting resolution A.787(19), it requested the Maritime Safety Committee and the Marine Environment Protection Committee to continue their work on this subject with a view to improving further the said procedures, as may be necessary,

NOTING resolution A.741(18) by which it adopted the International Management Code for the Safe Operation of Ships and for Pollution Prevention (International Safety Management (ISM) Code),

NOTING ALSO that the ISM Code has been made mandatory for certain ships, under the provisions of chapter IX of the International Convention for the Safety of Life at Sea, 1974, since 1 July 1998,

RECOGNIZING the need to develop guidelines for port State control related to the ISM Code and to incorporate them in the procedures,

RECOGNIZING ALSO the need to amend the reporting formats contained in the procedures on the basis of experience gained,

RECOGNIZING FURTHER the need to amend the procedures other than mentioned above on the basis of experiences gained from their implementation,

HAVING CONSIDERED the recommendation made by the Maritime Safety Committee at its seventy-first session and by the Marine Environment Protection Committee at its [forty-third] session,

1. ADOPTS amendments to the Procedures for port State control (resolution A.787(19)), the text of which is set out in the Annex to the present resolution;
2. INVITES Governments, when exercising port State control, to implement resolution A.787(19) and the amendments annexed to this resolution;

3. INVITES ALSO Governments, when exercising port State control related to the ISM Code, to note that port State control related to the ISM Code should be an inspection and not an audit and that their port State control officers should have the requisite training and appropriate knowledge of provisions of the ISM Code;
4. REQUESTS the Maritime Safety Committee and the Marine Environment Protection Committee to keep the revised Procedures under review on the basis of experiences gained from the implementation of such procedures;
5. AUTHORIZES the Maritime Safety Committee and the Marine Environment Protection Committee to amend the reporting formats contained in appendices 5, 6 and 7 of the Procedures on the basis of experience gained.

ANNEX

**AMENDMENTS TO THE PROCEDURES FOR PORT STATE CONTROL
(RESOLUTION A.787(19))**

- 1 The existing paragraph 1.4 is replaced by the following and the footnote is deleted:

"1.4 Provision for port State control

Regulation 19 of chapter I, regulation 6.2 of chapter IX and regulation 4 of chapter XI of SOLAS 74; article 21 of Load Lines 66; articles 5 and 6, regulation 8A of Annex I, regulation 15 of Annex II, regulation 8 of Annex III and regulation 8 of Annex V of MARPOL 73/78; article X of STCW 78; and article 12 of Tonnage 69 provide for control procedures to be followed by a Party to a relevant convention with regard to foreign ships visiting their ports. The authorities of port States should make effective use of these provisions for the purposes of identifying deficiencies, if any, in such ship which may render them substandard (see 4.1), and ensuring that remedial measures are taken."

- 2 The existing paragraph 1.6.3 is replaced by the following:

"1.6.3 Detention: Intervention action taken by the port State when the condition of the ship or its crew does not correspond substantially with the applicable conventions to ensure that the ship will not sail until it can proceed to sea without presenting a danger to the ship or persons on board, or without presenting an unreasonable threat of harm to the marine environment, whether or not such action will affect the normal schedule of the departure of the ship."

- 3 The following new sentence is added at the end of existing paragraph 2.2.3:

"When examining 1969 International Tonnage Certificates, the PSCO should be guided by appendix 4A."

- 4 The following new paragraph 2.2.6 is added after existing paragraph 2.2.5:

"2.2.6 In pursuance of control procedures under chapter IX of SOLAS 74 on the International Management Code for the Safe Operation of Ships and for Pollution Prevention (ISM Code), the PSCO should utilize the guidelines in paragraph 3.7."

- 5 The existing subparagraph 2.3.3 is replaced by the following:

"2.3.3 evidence that documentation required by the Conventions and listed in appendix 4 are not on board, incomplete, are not maintained or are falsely maintained;"

- 6 The existing subparagraph 2.3.8 is deleted and the existing subparagraphs 2.3.9 and 2.3.10 are renumbered as subparagraphs 2.3.8 and 2.3.9.

7 The existing paragraph 2.6.7 is replaced by the following:

"2.6.7 Where the grounds for detention are the result of accidental damage suffered on the ship's voyage to a port, no detention order should be issued, provided that:

- .1 due account has been given to the Convention requirements regarding notification to the flag State Administration, the nominated surveyor or the recognized organization responsible for issuing the relevant certificate;
- .2 prior to entering a port, the master or company has submitted to the port State authority details on the circumstances of the accident and the damage suffered and information about the required notification of the flag State Administration;
- .3 appropriate remedial action, to the satisfaction of the port State authority, is being taken by the ship; and
- .4 the port State authority has ensured, having been notified of the completion of the remedial action, that deficiencies which were clearly hazardous to safety, health or environment have been rectified."

8 The following new paragraph 2.6.11 is added after existing paragraph 2.6.10 and the existing paragraph 2.6.11 is renumbered as paragraph 2.6.12:

"2.6.11 The company or its representative have a right of appeal against a detention taken by the Authority of a port State. The appeal should not cause the detention to be suspended. The PSCO should properly inform the master of the right of appeal."

9 The existing paragraph 3.3.3 is replaced by the following:

"3.3.3 The PSCO should pay particular attention to the structural integrity and seaworthiness of bulk carriers and oil tankers and note that these ships must undergo the enhanced programme of inspection during surveys under the provision of regulation XI/2 of SOLAS 74."

10 The existing paragraph 3.3.4 is replaced by the following:

"3.3.4 The PSCO's assessment of the safety of the structure of those ships should be based on the Survey Report File carried on board. This file should contain reports of structural surveys, condition evaluation reports (translated into English and endorsed by or on behalf of the Administration), thickness measurement reports and a survey planning document. PSCO should note that there may be a short delay in the update of the Survey Report File following survey. Where there is doubt that the required survey has taken place, the PSCO should seek confirmation from the recognized organization."

11 In paragraph 3.4.12, "appendix 6" is replaced by "appendix 8".

12 The following new paragraph 3.7 is added after existing paragraph 3.6.8:

"3.7 Guidelines for port State control related to the ISM Code

3.7.1 To the extent applicable, the PSCO should examine the copy of the Document of Compliance (DOC), issued to the Company, and the Safety Management Certificate (SMC), issued to the ship. An SMC is not valid unless the Company holds a valid DOC for that ship type. The PSCO should in particular verify that the type of ship is included in the DOC and that the Company's particulars are the same on both the DOC and the SMC.

3.7.2 During the examination of on board documents and certificates, PSCOs should recognize:

- .1 that differences may exist between the classification societies' designation of "*bulk carrier*" that appear on the class certificate as defined in their individual Rules, versus the interpretation of "*bulk carrier*" contained in SOLAS CONF.4/25, annex, resolution 6 and that the latter definition should be used to determine if the ship should have been certified by 1 July 1998;
- .2 the common practice of issuing, after successfully completing an audit, SMCs and DOCs valid for a period not exceeding 5 months, to cover the period between completion of the audit and issuance of the full term certificate by either the Administration or the recognized organization; and
- .3 that the current valid DOC with proper annual endorsements is normally only available in the Company to which it has been issued and that the copy on board may not reflect the annual endorsements that exist on the valid DOC held by the Company.

3.7.3 If a vessel has been issued with Interim Certificates (DOC and/or SMC), the PSCO should check whether they have been issued in accordance with the provisions of paragraphs 3.3.2 and 3.3.4 of resolution A.788(19).

3.7.4 A more detailed inspection of the Safety Management System (SMS) should be carried out if clear grounds are established. Clear grounds may include absent or inaccurate ISM Code certification or detainable or many non-detainable deficiencies in other areas.

3.7.5 When carrying out a more detailed inspection, the PSCO may utilize, but not be limited to, the following questions to ascertain the extent of compliance with the ISM Code (references to the relevant paragraphs of the ISM Code are given in *italic* print in brackets).

- .1 Is there a Company safety and environmental protection policy and is the appropriate ship's personnel familiar with it? (2.2)
- .2 Is safety management documentation (e.g. manual) readily available on board? (11.3)
- .3 Is relevant documentation on the SMS in a working language or language understood by the ship's personnel? (6.6)

- .4 Can senior ship officers identify the Company responsible for the operation of the ship and does this correspond with the entity specified on the ISM Code certificates? (3)
- .5 Can senior ship officers identify the "designated person"? (4)
- .6 Are procedures in place for establishing and maintaining contact with shore management in an emergency? (8.3)
- .7 Are programmes for drills and exercises to prepare for emergency actions available on board? (8.2)
- .8 How have new crew members been made familiar with their duties if they have recently joined the ship and are instructions which are essential prior to sailing available? (6.3)
- .9 Can the master provide documented proof of his responsibilities and authority, which must include his overriding authority? (5)
- .10 Have non-conformities been reported to the Company and has corrective action been taken by the Company? PSCOs should not normally scrutinise the contents of any Non Conformity Note (NCN) resulting from internal audits. (9.1, 9.2)
- .11 Does the ship have a maintenance routine and are records available? (10.2)

3.7.5 Deficiencies in the Safety Management System should be recorded in the PSCO's inspection report. The port State authority should, if necessary, inform the flag State of deficiencies found in the SMS. Those deficiencies identified in the SMS, which are defined as major non-conformities in resolution A.788(19), have to be rectified before sailing. The procedures set out in chapter 4 are applicable."

13 The existing paragraph 4.1.3 is deleted.

14 The following new paragraphs 4.6 and 4.7 are added after existing paragraph 4.5:

"4.6 Suspension of inspection

4.6.1 In exceptional circumstances where, as a result of a more detailed inspection, the overall condition of a ship and its equipment, also taking into account the crew conditions, are found to be obviously substandard, the PSCO may suspend an inspection.

4.6.2 Prior to suspending an inspection, the PSCO should have recorded detainable deficiencies in the areas set out in appendix 1, as appropriate.

4.6.3 The suspension of the inspection may continue until the responsible parties have taken the steps necessary to ensure that the ship complies with the requirements of the relevant instruments.

4.6.4 In cases where the ship is detained and an inspection is suspended, the port State Authority should notify the responsible parties without delay. The notification should include information about the detention and state that the inspection is suspended until that authority has been informed that the ship complies with all relevant requirements.

4.7 Procedures for rectification of deficiencies and release

4.7.1 The PSCO should endeavour to secure the rectification of all deficiencies detected.

4.7.2 In the case of deficiencies which are clearly hazardous to safety or the environment, the PSCO should, except as provided in 4.7.3, ensure that the hazard is removed before the ship is allowed to proceed to sea. For this purpose appropriate action should be taken, which may include detention or a formal prohibition of a ship to continue an operation due to established deficiencies which, individually or together, would render the continued operation hazardous.

4.7.3 Where deficiencies which caused a detention as referred to in paragraph 4.7.2 cannot be remedied in the port of inspection, the port State authority may allow the ship concerned to proceed to the nearest appropriate repair yard available, as chosen by the master and agreed to by that authority, provided that the conditions agreed between the port State authority and the flag State are complied with. Such conditions will ensure that the ship shall not sail until it can proceed without risk to the safety of the passengers or crew, or risk to other ships, or without being an unreasonable threat of harm to the marine environment. Such conditions may include confirmation from the flag States that remedial action has been taken on the ship in question. In such circumstances the port State authority will notify the authority of the ship's next port of call, the parties mentioned in paragraph 5.1.4 and any other authority as appropriate. Notification to authorities should be made in the form shown in appendix 6. The authority receiving such notification should inform the notifying authority of action taken and may use the form shown in appendix 7.

4.7.4 On the condition that all possible efforts have been made to rectify all other deficiencies, except those referred to in 4.7.2 and 4.7.3, the ship may be allowed to proceed to a port where any such deficiencies can be rectified.

4.7.5 If a ship referred to in paragraph 4.7.3 proceeds to sea without complying with the conditions agreed to by the Authority of the port of inspection that port State Authority should immediately alert the next port, if known, the flag State and all other authorities it considers appropriate.

4.7.6 If a ship referred to in paragraph 4.7.3 does not call at the nominated repair port, the port State Authority of the repair port should immediately alert the flag State and detaining port State, which may take appropriate action, and notify any other authority it considers appropriate."

15 In paragraph 5.1.1, "master, owner or operator" is replaced by "master and/or company".

16 In the last sentence of paragraph 5.1.5, "appendix 5 or 6" is replaced by "appendix 5 or 8".

17 The existing footnote of paragraph 5.1.7 is replaced by the following:

" * Such addresses are available in MSC/Circ.838/MEPC.6/Circ.3, as amended, and the IMO Internet Home Page."

18 In the last sentence of paragraph 5.2.1, "appendix 7" is replaced by "appendix 9".

19 In the second sentence of paragraph 5.3.1, "appendix 5 or 6" is replaced by "appendix 5 or 8".

20 The existing paragraph 1.3 of appendix 1 is replaced by the following:

"1.3 If the result of any of these assessments is negative, taking into account all deficiencies found, the ship should be strongly considered for detention. A combination of deficiencies of a less serious nature may also warrant the detention of the ship. Ships which are unsafe to proceed to sea should be detained upon the first inspection irrespective of the time the ship will stay in port."

21 In "Areas under the SOLAS Convention" of paragraph 3 of appendix 1, the following new subparagraph 15 is added after existing subparagraph 14:

"15 Non-implementation of the enhanced programme of inspection under resolution A.744(18)."

22 In "Areas under the MARPOL Convention, Annex I" of paragraph 3 of appendix 1, the following new subparagraph 5 is added after existing subparagraph 4:

"5 Failure to meet the requirements of 13G(4) or alternative requirements specified in regulation 13G(7). "

23 The existing appendix 4 is replaced by the following:

"Appendix 4

List of certificates and documents

List of certificates and documents which to the extent applicable should be checked during the inspection referred to in 2.2.3 of the annex:

- 1 International Tonnage Certificate (1969);
- 2 Passenger Ship Safety Certificate;
- 3 Cargo Ship Safety Construction Certificate;
- 4 Cargo Ship Safety Equipment Certificate;
- 5 Cargo Ship Safety Radio Certificate;
- 6 Exemption Certificate;
- 7 Cargo Ship Safety Certificate;
- 8 Document of Compliance (SOLAS 74, Regulation II-2/54);
- 9 Dangerous Goods Special List or Manifest, or Detailed Stowage Plan;

- 10 International Certificate of Fitness for the Carriage of Liquefied Gases in Bulk, or the Certificate of Fitness for the Carriage of Liquefied Gases in Bulk, whichever is appropriate;
- 11 International Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk, or the Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk, whichever is appropriate;
- 12 International Oil Pollution Prevention Certificate;
- 13 International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk;
- 14 International Load Line Certificate (1966);
- 15 International Load Line Exemption Certificate;
- 16 Oil Record Book, parts I and II;
- 17 Shipboard Oil Pollution Emergency Plan;
- 18 Cargo Record Book;
- 19 Minimum Safe Manning Document;
- 20 Certificates of Competency;
- 21 Medical certificates (see ILO Convention No. 73);
- 22 Stability information;
- 23 Safety Management Certificate and copy of Document of Compliance (SOLAS Chapter IX);
- 24 Certificates as to the ship's hull strength and machinery installations issued by the classification society in question (only to be required if the ship maintains its class with a classification society);
- 25 Survey Report Files (in case of bulk carriers or oil tankers in accordance with resolution A.744(18));
- 26 For ro-ro passenger ships, information on the A/A max ratio;
- 27 Document of authorization for the carriage of grain;
- 28 Special Purpose Ship Safety Certificate;
- 29 High-Speed Craft Safety Certificate and Permit to Operate High-Speed Craft;
- 30 Mobile Offshore Drilling Unit Safety Certificate;
- 31 For oil tankers, the record of oil discharge monitoring and control system for the last ballast voyage;
- 32 The muster list, fire control plan, and for passenger ships, a damage control plan;
- 33 Ship's log book with respect to the records of tests and drills and the log for records of inspection and maintenance of lifesaving appliances and arrangements;
- 34 Procedures and Arrangements Manual (chemical tankers);
- 35 Cargo Securing Manual;
- 36 Certificate of Registry or other document of nationality;
- 37 Garbage Management Plan;
- 38 Garbage Record Book;
- 39 Bulk carrier booklet (SOLAS chapter VI regulation 7); and
- 40 Reports of previous port State control inspections."

24 The following new appendix 4A is added after revised appendix 4:

"Appendix 4A

Guidelines for port State control under the 1969 Tonnage Convention

1 The International Convention on Tonnage Measurement of Ships, 1969, which came into force on 18 July 1982, applies to:

- 1.1 new ships, i.e. ships the keels of which were laid on or after 18 July 1982; and
- 1.2 existing ships, i.e. ships the keels of which were laid before 18 July 1982, as from 18 July 1994,

except that for the purpose of application of SOLAS, MARPOL and STCW Conventions, the following interim schemes indicated in paragraph 2 may apply.

2 In accordance with the interim schemes adopted by IMO¹, the Administration may, at the request of the shipowner, use the gross tonnage determined in accordance with national rules prior to the coming into force of the 1969 Tonnage Convention, for the following ships:

- 2.1 for the purpose of SOLAS 74:
 - .1 ships the keels of which were laid before 1 January 1986;
 - .2 in respect of regulation IV/3 of SOLAS 74, ships the keels of which were laid on or after 1 January 1986 but before 18 July 1994; and
 - .3 cargo ships of less than 1,600 tons gross tonnage (as determined under the national tonnage rules) the keels of which were laid on or after 1 January 1986 but before 18 July 1994;
- 2.2 for the purpose of STCW 78, ships falling under the categories of .1.1 and .1.3 above, except that for the purpose of 1995 amendments to STCW 78 the interim scheme does not apply (see regulation I/15.3 of the 1995 STCW amendments); and
- 2.3 for the purpose of MARPOL 73/78 ships of less than 400 tons gross tonnage (as determined under the national tonnage rules) the keel of which were laid before 18 July 1994.

3 For ships to which the above interim schemes apply, the statement to the effect that gross tonnage has been measured in accordance with the national tonnage rules should be included in the REMARKS column of the International Tonnage Certificate (1969) and in the footnote to the figure of the gross tonnage in the relevant SOLAS, STCW and MARPOL certificates.

¹ Resolutions A.494(XII) in respect to SOLAS 74, A.540(13) in respect to STCW 78, and A.541(13) in respect to MARPOL 73/78.

4 The PSCO should take the following actions as appropriate when deficiencies are found in relation to the 1969 Tonnage Convention:

- 4.1 if a ship does not hold a valid 1969 Tonnage Certificate, a letter of warning should be issued to the master or shipowner;
- 4.2 if the required remarks and footnote are not included in the relevant certificates on ships to which the interim schemes apply, this deficiency should be notified to the master;
- 4.3 if the main characteristics of the ship differ from those entered on the 1969 International Tonnage Certificate, so as to lead to an increase in the gross tonnage or net tonnage, the flag State should be informed without delay.

5 The control provisions of article 12 of the 1969 Tonnage Convention do not include the provision for detention of ships."

25 The existing appendix 5 is replaced by the following:

"Appendix 5
REPORT OF INSPECTION IN ACCORDANCE WITH
IMO PORT STATE CONTROL PROCEDURES (RES.A....(....))*

FORM A

(reporting authority) (address) (telephone) (telefax)	copy to: master head office PSCO if ship is detained, copy to: flag State IMO recognized organization, if applicable
--	--

1 name of reporting authority	2 name of ship	5 call sign
3 flag of ship	4 type of ship	8 deadweight (where applicable)
6 IMO number	7 gross tonnage	11 place of inspection
9 year of build	10 date of inspection	
12 classification society	13 date of release from detention	
14 particulars of company		

15 relevant certificate(s) ***		
<u>a title</u>	<u>b issuing authority</u>	<u>c date of issue and expiry</u>
1 .....	.....	.....
2 .....	.....	.....
3 .....	.....	.....
4 .....	.....	.....
5 .....	.....	.....
6 .....	.....	.....
7 .....	.....	.....
8 .....	.....	.....
9 .....	.....	.....
10 .....	.....	.....
11 .....	.....	.....
12 .....	.....	.....
<u>d information on last intermediate or annual survey ***</u>		
date	surveying authority	place
1 .....	.....	.....
2 .....	.....	.....
3 .....	.....	.....
4 .....	.....	.....
5 .....	.....	.....
6 .....	.....	.....
7 .....	.....	.....
8 .....	.....	.....
9 .....	.....	.....
10 .....	.....	.....
11 .....	.....	.....
12 .....	.....	.....

16 deficiencies		
17 ship detained	no	yes ***
18 supporting documentation	no	yes (see annex)

issuing office	name
	(duly authorized PSCO of reporting authority)
telephone	
telefax	signature

This report must be retained on board for period of two years and must be available for consultation by Port State Control Officers at all times.

* This inspection report has been issued solely for the purpose of informing the master and other port State that an inspection by the port State, mentioned in the heading, has taken place. This inspection report cannot be construed as a seaworthiness certificate in excess of the certificates the ship is required to carry.
 ** To be completed in the event of a detention.
 *** Masters, shipowners and/or operators are advised that detailed information on a detention may be subject to future publication.

26 The following new appendices 6 and 7 are added after revised appendix 5 and the existing appendices 6 and 7 are renumbered as appendices 8 and 9:

"Appendix 6

**REPORT OF DEFICIENCIES
NOT FULLY RECTIFIED OR ONLY PROVISIONALLY REPAIRED**

In accordance with the provision of 4.7.3 of IMO Port State Control Procedures (Res.A....(...))

(Copy to maritime Authority of next port of call, flag administration, or other certifying authority as appropriate)

- | | |
|--|---|
| 1. From (country/region) : | 2. Port : |
| 3. To (country/region) : | 4. Port : |
| 5. Name of ship : | 6. Date departed : |
| 7. Estimated place and time of arrival : | |
| 8. IMO number : | 9. Flag of ship & POR : |
| 10. Type of ship : | 11. Call sign : |
| 12. Gross tonnage : | 13. Year of build : |
| 14. Issuing authority of relevant certificate(s) : | |
| 15. Nature of deficiencies to be rectified : | 16. Suggested action
(including action at next port of call) : |
-
-
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-
-

17. Action taken :
-
-
-
-
-
-

Reporting Authority:	Office:
Name: duly authorized PSC officer of (reporting authority)	Facsimile:
Signature:	Date:

Appendix 7

REPORT OF ACTION TAKEN
TO THE NOTIFYING AUTHORITY

In accordance with the provision of 4.7.3 of IMO Port State Control Procedures (Res.A....(...))

(by Facsimile and/or Mail)

1. To : (Name)
(Position)
(Authority)
Telephone: Telefax:
Date:
2. From : (Name)
(Position)
(Authority)
Telephone: Telefax:
3. Name of ship:
4. Call sign: 5. IMO number:
6. Port of inspection:
7. Date of inspection:
8. Action taken:
(a) Deficiencies (b) Action taken
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9. Next port: (Date)
- 10 Supporting documentation No Yes (See attached)

Signature"

ANNEX 14**DRAFT ASSEMBLY RESOLUTION****GLOBAL AND UNIFORM IMPLEMENTATION OF THE HARMONIZED
SYSTEM OF SURVEY AND CERTIFICATION (HSSC)**

THE ASSEMBLY,

RECALLING Article 15(j) of the Convention on the International Maritime Organization concerning the functions of the Assembly in relation to regulations and guidelines concerning maritime safety and the prevention and control of marine pollution from ships,

RECALLING ALSO that the International Conference on the Harmonized System of Survey and Certification, 1988 (1988 HSSC Conference), adopted the Protocol of 1988 relating to the International Convention for the Safety of Life at Sea, 1974 (1988 SOLAS Protocol), and the Protocol of 1988 relating to the International Convention on Load Lines, 1966 (1988 Load Line Protocol) which introduce, *inter alia*, the harmonized system of survey and certification under the International Convention for the Safety of Life at Sea, 1974 (1974 SOLAS Convention) and the International Convention on Load Lines, 1966 (1966 Load Line Convention),

NOTING that the 1988 SOLAS and Load Line Protocols are due to enter into force on 3 February 2000 resulting in the harmonized system of survey and certification taking effect as from that date with respect to ships entitled to fly the flag of States Parties to the 1988 SOLAS and Load Line Protocols,

NOTING ALSO that, by the resolutions given below, amendments have been adopted to introduce the harmonized system of survey and certification in the following instruments:

- (a) Annexes I and II of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78), by resolution MEPC.39(29);
- (b) the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code), by resolutions MEPC.40(29) and MSC.16(58);
- (c) the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC Code), by resolution MSC.17(58); and
- (d) the Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (BCH Code), by resolutions MEPC.41(29) and MSC.18(58),

NOTING FURTHER that the aforementioned amendments to the above instruments will also enter into force on 3 February 2000 and that:

- (a) amendments to MARPOL 73/78, the IBC Code and BCH Code will take effect with respect to ships entitled to fly the flags of States Parties to MARPOL 73/78; and
- (b) amendments to the IBC Code and the IGC Code will take effect with respect to ships entitled to fly the flags of States the Governments of which are Contracting Governments of the 1974 SOLAS Convention,

irrespective of whether they are also Parties to the 1988 SOLAS and Load Line Protocols or not,

BEING DESIROUS that all States apply a single and uniform system of survey and certification to all types of ships entitled to fly their flags,

RECOGNIZING the need for the change-over from the existing system of survey and certification to the harmonized system in a uniform manner,

RECALLING resolution A.718(17) on Early implementation of the harmonized system of survey and certification, which encourages States to introduce the harmonized system of survey and certification prior to the entry into force of the 1988 SOLAS and Load Line Protocols,

BEING CONVINCED that the harmonized system of survey and certification is at least equivalent to the system prescribed in the existing SOLAS and Load Line Conventions,

BELIEVING that the implementation of a single and uniform system of survey and certification could best be achieved through the introduction of the harmonized system of survey and certification also by States which are not Parties to the 1988 SOLAS and Load Line Protocols, as equivalent to the existing system,

BELIEVING ALSO that the global and uniform implementation of the harmonized system of survey and certification by all States could avoid possible problems or confusion in contributing to the determination of the duration and validity of certificates issued,

HAVING CONSIDERED the recommendation made by the Maritime Safety Committee at its seventy-first session and by the Marine Environment Protection Committee at its [forty-third] session,

1. INVITES States to introduce the harmonized system of survey and certification in the manner as provided for in Annex 1 to the present resolution;
2. AGREES that States which are Contracting Governments to the 1974 SOLAS Convention and the 1966 Load Line Convention but not Parties to the 1988 SOLAS and Load Line Protocols may:
 - (a) implement the harmonized system of survey and certification as from 3 February 2000; and
 - (b) issue certificates in the form prescribed by the 1988 SOLAS and Load Line Protocols as modified in accordance with Annex 2 to the present resolution;
3. INVITES port States, whether or not they are Parties to the 1988 SOLAS and Load Line Protocols, to accept the certificates issued in accordance with paragraph 1 above as equivalent to the certificates issued under the SOLAS and Load Line Convention or Protocols in force for those States;
4. REQUESTS Governments that implement the harmonized system of survey and certification in accordance with the provisions of this resolution to inform the Secretary-General of their action and of the date when it will take effect;
5. REQUESTS ALSO that the Secretary-General keep Member Governments informed of those Governments that are introducing the harmonized system of survey and certification in accordance with the provisions of this resolution;

6. URGES States which have not yet become Parties to the 1988 SOLAS and Load Line Protocols to do so as soon as possible.

ANNEX 1

INTRODUCTION OF THE HARMONIZED SYSTEM OF SURVEY AND CERTIFICATION

1 The current certificates that are on board a particular ship on 3 February 2000 will remain valid until they expire.

2 The date for the introduction of the harmonized system of the survey and certification (HSSC) after 3 February 2000 should normally be the latest expiry date of certificates issued under the SOLAS, Load Line and MARPOL Conventions, unless other convenient date, e.g. the expiry date of the Cargo Ship Safety Construction Certificate, the date of dry docking or date of repair or renovation, is agreed upon between the shipowner or company and the Administration.

3 In the case where an existing certificate has expired before the date of introduction of the harmonized system, a new certificate using the form prescribed under the harmonized system may be issued after the renewal survey has been carried out. The validity of the new certificate may be limited to the date of introduction of the harmonized system as provided for in paragraph 2 above.

4 Notwithstanding that some certificates may still be valid when the harmonized system of survey and certification is introduced on a particular ship, renewal surveys should be carried out whether or not they are due, and a new set of the relevant certificates under the harmonized system should be issued and the anniversary date common to all certificates should be specified. In general, renewal surveys carried out within three months of the date of introduction of the harmonized system may be valid, and the extent of renewal surveys to be carried out may take account of the date and extent of the previous renewal surveys if carried out only recently.

5 When implementing the harmonized system of survey and certification, it should be applied to all types of ships and in respect of all relevant instruments.

ANNEX 2

**MODIFICATIONS TO THE FORMS OF CERTIFICATES PRESCRIBED
BY THE 1988 SOLAS AND LOAD LINE PROTOCOLS****PASSENGER SHIP SAFETY CERTIFICATE
CARGO SHIP SAFETY CONSTRUCTION CERTIFICATE
CARGO SHIP SAFETY EQUIPMENT CERTIFICATE
CARGO SHIP SAFETY RADIO CERTIFICATE
CARGO SHIP SAFETY CERTIFICATE**

After the words "issued under the provisions of the INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974" delete "as modified by the Protocol of 1988 relating thereto" and insert "in accordance with Assembly resolution A...(21) relating to the global implementation of the harmonized system of survey and certification".

**Record of Equipment for the Passenger Ship Safety Certificate (Form P)
Record of Equipment for the Cargo Ship Safety Equipment Certificate (Form E)
Record of Equipment for the Cargo Ship Safety Radio Certificate (Form R)
Record of Equipment for the Cargo Ship Safety Certificate (Form C)**

After the words "RECORD OF EQUIPMENT FOR COMPLIANCE WITH THE INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974" delete "AS AMENDED IN 1988" and insert "in accordance with Assembly resolution A...(21) relating to the global implementation of the harmonized system of survey and certification".

**INTERNATIONAL LOAD LINE CERTIFICATE
INTERNATIONAL LOAD LINE EXEMPTION CERTIFICATE**

After the words "issued under the provisions of the INTERNATIONAL CONVENTION ON LOAD LINES, 1966" delete "as modified by the Protocol of 1988 relating thereto" and insert "in accordance with Assembly resolution A...(21) relating to the global implementation of the harmonized system of survey and certification".

ANNEX 15**DRAFT ASSEMBLY RESOLUTION****PROCEDURE FOR ADOPTION OF, AND AMENDMENTS TO, PERFORMANCE STANDARDS AND TECHNICAL SPECIFICATIONS**

THE ASSEMBLY,

RECALLING Article 15(j) of the Convention on the International Maritime Organization concerning the functions of the Assembly in relation to regulations and guidelines concerning maritime safety [and the prevention and control of marine pollution from ships],

RECOGNIZING that the International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended, [the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78)] and other IMO instruments contain provisions referring to performance standards and technical specifications adopted by the Organization,

NOTING the Guidelines on methods for making references to IMO and other instruments in IMO conventions and other mandatory instruments (MSC/Circ.../MEPC/Circ...), in particular paragraph 12 thereof concerning procedures for amendments to performance standards and technical specifications,

NOTING ALSO resolution A.825(19) by which it adopted the Procedure for adoption and amendment of performance standards for radio and navigational equipment,

BEING DESIROUS of establishing a uniform procedure for the adoption of, and amendments to, any performance standards and technical specifications developed by the Maritime Safety Committee [and Marine Environment Protection Committee] to ensure that such standards and specifications are kept abreast of technological and industry developments,

HAVING CONSIDERED the recommendation made by the Maritime Safety Committee at its seventy-first session [and by the Marine Environment Protection Committee at its forty-third session],

1. RESOLVES that the function of adopting performance standards and technical specifications as well as amendments thereto shall be performed by the Maritime Safety Committee [and Marine Environment Protection Committee, as appropriate,] on behalf of the Organization;
2. REVOKES resolution A.825(19).

ANNEX 16

DRAFT GUIDELINES ON METHODS FOR MAKING REFERENCE TO IMO AND OTHER INSTRUMENTS IN IMO CONVENTIONS AND OTHER MANDATORY INSTRUMENTS

General

1 The purpose of these Guidelines is to provide a standard text for inclusion in new IMO conventions and other mandatory instruments relating to maritime safety [and pollution prevention] and in future amendments to existing conventions and other instruments, in order to ensure that, where reference is made to IMO and other instruments, a uniform wording is used to clearly indicate the legal status of the instrument in question after the IMO body concerned has decided on such a status.

IMO instruments to be treated as mandatory

2 When Contracting Governments or Parties to an IMO convention have decided that full effect should be given to the provisions of certain codes or requirements under that convention in the same manner as the regulations of the convention themselves, such instruments should be treated as mandatory and have the same legal status as the parent convention.

3 The most appropriate method for referencing, in an IMO convention, instruments determined to become mandatory under the parent convention is to follow the SOLAS provisions used for making the IBC and IGC Codes (under chapter VII) and HSC Code (under chapter X) mandatory, i.e.:

- .1 to expressly refer to such instruments in the text of the relevant convention regulations;
- .2 to expressly provide that future amendments to such instruments should follow the amendment procedures laid down in the relevant article of the parent convention; and
- .3 to expressly prescribe in the text of the relevant convention regulations that "such requirements shall be treated mandatory" in case the word "should" has been used in such instruments instead of "shall".

4 For such instruments, the use of terms such as "guidelines" or "guidance", which might be misunderstood as implying recommendations, should be avoided as far as possible.

5 It would be preferable to adopt the text of the instrument being referenced at the time of adoption of the relevant amendments to the convention concerned and to prepare an authentic text of the instrument, which will be used as the basis for the preparation of any certified copies of future amendments to such an instrument.

Performance standards and technical specifications in IMO instruments

6 The SOLAS and other IMO conventions contain provisions referring to performance standards and technical specifications, such as performance standards for GMDSS equipment, shipboard navigational equipment, oil discharge and monitoring systems, etc. which are accompanied by footnotes identifying such performance standards or technical specifications as adopted by the Organization, i.e. by means of Assembly resolutions, MSC or MEPC resolutions, etc. Such standards and specifications referred to in the footnotes are not regarded as mandatory instruments for treaty purposes, since they do

not appear in the authentic text of the parent convention and can be updated by the Secretariat as necessary; hence, they do not constitute an integral part of the parent convention. Nevertheless, Contracting Governments or Parties to parent conventions are obliged to establish national standards not inferior, or at least equivalent, to those developed by the Organization.

7 In referencing such standards and specifications, the expressions shown in the following examples should be used:

- "equipment shall conform to performance standards not inferior to those adopted by the Organization";
- "equipment shall be tested in accordance with specifications at least equivalent to those developed by the Organization"; or
- "the manual shall be drawn up to a standard at least equivalent to that developed by the Organization."

8 Expressions, such as "the equipment shall comply with the standards adopted by the Organization" or "... in accordance with the standards adopted by the Organization", should not be used in order to avoid any misunderstanding that the standards not identified in the regulation are mandatory.

9 Standards and specifications referred to in footnotes should not appear in the authentic text of the convention and may be updated by the Secretariat as necessary when a new edition of the relevant publication is prepared.

10 For such standards and specifications, the use of terms such as "guidelines" or "guidance" should be avoided as far as possible.

11 The standards and specifications referred to above should clearly indicate their effective date and application to new and existing ships, or both, and new and existing installations of equipment, or both, unless this is already specified in the relevant regulations of the parent convention.

12 Future amendments to performance standards and technical specifications should be processed and adopted in accordance with the Committees' Rules of Procedure and the Guidelines on the organization and method of work of the Committees and their subsidiary bodies. When such amendments are adopted as new standards superseding existing ones (with new resolution numbers), the revised standard(s) should normally take effect not earlier than six months after adoption unless expressly decided otherwise by the relevant Committee at the time of adoption.

IMO instruments to be treated as recommendations

13 When Contracting Governments or Parties to an IMO convention have decided that they should implement certain instruments, such as guidelines, manuals or guidance, with certain discretion and flexibility, such instruments should be treated as recommendatory instruments.

14 Instruments of recommendatory status should be referred to in the footnote accompanying the relevant regulations of the parent convention. In such cases:

- .1 clear expressions should be used in the regulation indicating the recommendatory status of the instrument, e.g. "... shall be approved by the Administration, taking into account the recommendations developed by the Organization" or "...., based on the guidelines developed by the Organization"; and
- .2 self-contradictory expressions, such as "shall comply with the recommendations", should be avoided.

15 Guidelines or recommendations referred to in the footnotes should not appear in the authentic text of the convention and may be updated by the Secretariat as necessary when a new edition of the relevant publication is prepared.

Method for referencing instruments in mandatory IMO instruments

16 The above procedures should also apply for the purpose of referencing IMO instruments in mandatory instruments, such as the IBC, IGC, HSC Codes, etc.

17 If the Committee concerned decides that an instrument referred to in the mandatory instrument should be treated as mandatory, the text to make reference to such an instrument in accordance with paragraph 3 above should be included in the relevant regulation of the parent convention rather than in the mandatory instrument itself.

Method for referencing industry standards in mandatory IMO instruments

18 If industry standards, such as ISO or IEC standards, or IACS unified requirements, are to be referred to in IMO conventions or other mandatory instruments, the following method should be used:

- .1.1 industry standards to be treated as mandatory should be adopted by the relevant Committee in the form of an appropriate resolution, and should be referenced as described in paragraphs 2 to 5 above;
- .1.2 industry standards containing performance standards or technical specifications should be referred to as "standards acceptable to the Organization" with an appropriate footnote to identify such standards, e.g. "equipment shall conform to performance standards not inferior to those acceptable to the Organization" or "equipment shall be tested in accordance with specifications at least equivalent to those acceptable to the Organization"; and
- .2 in the case of industry standards which should be treated as recommendations and referred to in footnotes, expressions similar to those mentioned in paragraph 14 above should be used, e.g. "... should be tested in accordance with specifications at least equivalent to those acceptable to the Organization".

19 The standards referred to in footnotes should clearly indicate their edition, such as the number or the effective date. When amended by the relevant industry organization, the revised edition of the standards should be approved by the relevant Committee and the footnote amended accordingly.

20 The provisions of paragraph 11 should apply, *mutatis mutandis*, to the standards referred to in paragraph 18.1.2.

ANNEX 17**DRAFT REVISED GUIDELINES ON THE ORGANIZATION AND
METHOD OF WORK OF THE MARITIME SAFETY COMMITTEE
AND THE MARINE ENVIRONMENT PROTECTION
COMMITTEE AND THEIR SUBSIDIARY BODIES****INTRODUCTION**

1 The purpose of these Guidelines is to provide a uniform basis for the MSC and the MEPC and their subsidiary bodies to conduct their work in an efficient and effective manner having regard to the available resources of the Organization. This will enable the Committees to respond successfully to the needs for enhanced maritime safety and protection of the marine environment, thus providing an efficient mechanism towards achieving the desired goals of the Organization.

2 Proper application of the Guidelines will also enhance the ability of Committee members and delegations to subsidiary bodies of the Committees to cover the full spectrum of IMO activities relevant to their work and thus provide for their effective participation in the rule-making process of the Organization. It is also expected that the Guidelines will enable the Committees to further improve their decision-making functions.

3 The Guidelines are applicable to the work of the Committees and their subsidiary bodies as well as to working groups, drafting groups and correspondence groups set up by these bodies. The Chairmen of the Committees, subsidiary bodies, working groups, drafting groups and correspondence groups should make all efforts to ensure strict compliance with the Guidelines.

4 The Guidelines and the appendices thereto will be kept under review and they will be updated as necessary in the light of experience gained in their application.

CO-ORDINATION OF WORK AND REVIEW OF WORK PROGRAMMES

5 The Committees should periodically examine their technical work programmes, establish priorities, allocate work to their subsidiary bodies and review the allocation of meeting weeks to each body and their future work programmes and provisional agendas, taking into account any recommendations made by meetings of the Committees' and subsidiary bodies' Chairmen convened as provided in paragraph 13.

6 The Committees should periodically review the necessity for the continued existence of their subsidiary bodies.

7 The Committees should regularly review the status of all conventions, protocols and other major instruments under their purview.

8 The subsidiary bodies should, as necessary, operate under the instructions of, and report to, both the Maritime Safety Committee and the Marine Environment Protection Committee.

9 The subsidiary bodies should not recommend the convening of working groups during sessions of the Committee(s) concerned without prior consultation of the Chairman of the subsidiary body concerned with the Chairman of the Committee(s).

10 When work is undertaken involving more than one subsidiary body, one of them should be designated to co-ordinate the work so as to avoid duplication, maintain consistency in the standards being developed and ensure effective communication between the subsidiary bodies concerned. When deciding on the target date for completion of such work and selecting the item for inclusion in the agenda of a particular session of the subsidiary bodies involved, special attention should be given to ensuring that the co-ordinating subsidiary body can finalize the work by the date decided.

11 In order to avoid superfluous work and documentation when assigning work to subsidiary bodies, the Committee(s) should ensure that only those subsidiary bodies essential for the completion of the task in hand should be so involved.

12 A subsidiary body may request contribution from another body, in which case the latter should be allowed sufficient time to prepare its contribution, subject to the provisions of paragraph 6 of the attachment to appendix 4.

13 The Committee Chairmen may convene a meeting of Chairmen of the Committees' subsidiary bodies, basically in conjunction with Committees' sessions, to advise the Committees on subjects such as those referred to in paragraph 5, to ensure co-ordination of the work and examine other matters pertinent to the effective conduct of business of the Committees and their subsidiary bodies.

14 The Committee Chairmen should, at the end of every second year, submit to their respective Committees a joint plan covering the activities, priorities and meetings of their subsidiary bodies over the following two years.

15 When both Committees have been charged by the Council, Assembly or a conference with the consideration of a specific item and one Committee has finalized its consideration, the other Committee should consider it at its first subsequent session as a high priority issue.

WORKING ARRANGEMENTS

Committees and subsidiary bodies

16 In compliance with resolutions A.500(XII) and A.777(18), the Committees, in determining inclusion of new work programme items, should be guided by priorities established in accordance with the guidelines set out in appendix 1.

17 When an issue is transferred to the Committee by another Committee of the Organization for specific action, the Committee, before including the subject in question in the work programme, must decide that the requirements of paragraph 16 are fully satisfied, even if the issue, in accordance with the criteria of the referring Committee, satisfies the requirements of resolutions A.500(XII) and A.777(18).

18 The following should apply when the Committees are invited to consider proposals for the inclusion of new items in their work programmes:

.1 Proposals for new items (other than proposals for new, or amendments to, existing mandatory instruments)

In such cases, specific indication of the action required should be included in the proposal and the proponent should document the need for the measure proposed and its relation to the objectives of the Organization, determining its scope and analysing the issues involved, having regard to the costs to the maritime industry, the legislative and administrative burdens involved and benefits which would accrue there from and indicating, where possible, its degree of priority and a target completion date or the number of sessions needed for completion of the item so that the Committee(s) may make an informed decision as to the action to be taken. Decisions on what should be achieved should be made following thorough discussions in plenary; and

.2 Proposals for new, or amendments to, existing mandatory instruments

In such cases, a compelling need for such amendments should be demonstrated by the proponent(s), and an analysis of the implications of such amendments, particularly those with far-reaching implications and consequential proposals for other amendments, having regard to the costs to the maritime industry, the legislative and administrative burdens involved and benefits which would accrue therefrom, should be provided so as to give Member Governments a clearer perception of the scope of the proposed new requirements and an improved basis on which to take decisions. A certain degree of flexibility might be allowed in the application of this paragraph in exceptional circumstances, in particular in the case of proposed amendments on operational safety matters.

19 Submissions by Member Governments, intergovernmental organizations or non-governmental organizations co-sponsored by a Member Government containing proposals for the inclusion of new work programme items, as referred to in paragraph 18, should, taking into account the criteria for general acceptance set out in paragraph 4 and priority setting provided in paragraphs 5 to 7 of appendix 1, be prepared in accordance with the format set out in appendix 3. Where the information required under appendix 3 cannot be provided, the reasons therefore should be clearly indicated.

20 Submissions to the Committee(s) or subsidiary bodies highlighting problems or shortcomings identified in a particular area(s) of maritime safety or protection of the marine environment should, in general and where possible, also suggest appropriate solutions thereto.

21 In order to facilitate consideration by the Committee(s), the Chairman of the Committee concerned should, with the support of the Secretariat, undertake a preliminary assessment of whether each new work programme item complies with the criteria for general acceptance provided in paragraph 4, and assign preliminary priorities to the new work programme items according to paragraphs 5 to 7 of appendix 1, and submit the outcome of such preliminary assessment and assignment of priorities to each session of the Committee concerned for approval.

22 When new constructional requirements have been proposed for new ships, the Committee(s) and its subsidiary bodies should, in order to minimize the unavoidable gaps in safety standards between new

and existing ships, consider applying the proposed new requirements, or any modification of same, to existing ships using the Interim guidelines for the systematic application of the grandfather clauses (MSC/Circ.765/MEPC/Circ.315).

23 Recognizing the human factor as an integral part of any effort to enhance maritime safety and protection of the marine environment, the subsidiary bodies should consider the involvement of the human factor whenever new requirements are developed and existing requirements are reviewed, taking into account the human element principles addressed in MSC/Circ.763/MEPC/Circ.313.

24 Based on the Guidelines on the establishment of priorities in the work programmes (appendix 1 hereto), the Committees should:

- .1 decide on items to be included in the work programmes of their subsidiary bodies with clear and detailed instructions for the work to be undertaken;
- .2 establish priorities and target dates or the number of sessions needed for the completion of the consideration of such items; and
- .3 assign work on such new items to appropriate subsidiary bodies.

25 The Committees should not, as a rule, permit any subsidiary body to commence work on the review or improvement of provisions already approved by it, until sufficient experience has been gained from the operation of such existing provisions.

26 Subsidiary bodies should not include in their work programmes new subjects or expand existing subjects unless directed or authorized to do so by the Committee(s). Subsidiary bodies should not develop amendments to, or interpretations of, any relevant IMO instrument without authorization from the Committee(s).

27 Where a Member Government considers a matter is of sufficient urgency and importance, a well-documented proposal may be submitted simultaneously to the Committee and to the relevant subsidiary body(ies); however, any continuing work of the subsidiary body(ies) on such a proposal should be subject to the approval of the Committee(s) (see paragraph 7 of the attachment to appendix 4). In addition, a subsidiary body may also deal with urgent matters requested by other subsidiary bodies, pending formal approval by the Committee(s).

28 Items for which extensive work is required, such as the preparation of codes, should, when appropriate, be placed on the agendas of alternate sessions of the bodies concerned to allow adequate time for the preparatory work of delegations.

29 In respect of subjects requiring research, contributions from other organizations and appropriate entities should be encouraged and taken into account. Exchange of information on technological developments should be encouraged.

30 Subsidiary bodies should not, as a rule, issue circulars which are supposed to be issued only after approval by the Committee(s). However, in exceptional cases, subsidiary bodies may issue circular(s) within their area of competence subject to endorsement of their action by the Committee(s) concerned at their first subsequent session(s).

Agenda management procedure

31 With a view to keeping the workload of the Committees at a manageable level, subsidiary bodies should propose to the Committee(s) for approval the agenda of their next session drafted in accordance with the provisions of the agenda management procedure set out in appendix 4.

Working groups and correspondence groups

32 The Committees and their subsidiary bodies should limit the number of working groups formed during their sessions to a maximum of three, bearing in mind the difficulties small delegations experience in being represented on such groups and the fact that such groups work without interpretation. To such an end, subsidiary bodies should endeavour to consider, as appropriate, items on their agenda in plenary, rather than establishing groups to deal with them.

33 When appropriate, working groups should make full use of the five working days of a session submitting their reports to the next session of their parent body. When working group reports are to be prepared during a session, all efforts should be made to keep such reports as short as possible.

34 In addition to working groups, the Committees and their subsidiary bodies may form drafting groups. In no case, more than five groups (e.g. 3 working and 2 drafting groups) should meet simultaneously during a session. If additional drafting groups are needed, they should meet outside normal working hours.

35 To facilitate the consideration of an issue, correspondence groups may be established, in accordance with the Guidelines for correspondence groups, set out in appendix 2, after the body concerned has agreed to consider the issue. The work of a correspondence group (e.g. the receipt and processing of comments and suggestions) does not pre-empt formal consideration of the relevant issue by the parent body concerned or the positions taken by Member Governments or international organizations participating in the correspondence group. The Committees and subsidiary bodies should not establish more than three correspondence groups. These correspondence groups should, as a rule, be established only for high priority agenda items. Sub-groups within a correspondence group should not be established. No official meetings of members of correspondence groups should be held without the prior approval of the Committee(s).

36 When working groups, drafting groups and correspondence groups are formed, draft terms of reference should be prepared following consultations between the Chairman of the relevant committee or subsidiary body and the Secretariat. The terms of reference should be proposed by the Chairman and agreed by the plenary session of the body concerned before the group starts work, and should be made available to every member of the group. Any departure from the terms of reference which may be deemed necessary by the group concerned in the light of its consideration of the topic it has been tasked with, should be agreed with the Chairman of the relevant Committee or subsidiary body.

37 Subject to approval by the Council, intersessional meetings of working groups may be convened without interpretation services. Intersessional meetings should only be held after careful consideration of their need by the Committee(s), taking into account the priority and urgency of the specific matter such meetings will be invited to address. Intersessional meetings of such groups should be held at IMO Headquarters immediately before or after an agreed session of the parent body concerned. Other

arrangements may be considered; however, no arrangements should be made with respect to intersessional meetings until such meetings have been approved by the Committee(s).

PREPARATION AND INTRODUCTION OF DOCUMENTS AND REPORTS

38 Documents should be prepared in single spacing and be as concise as possible so as to facilitate their timely processing. In order to enhance the clear understanding of documents, the following should be observed:

- .1 all documents should include a brief summary prepared in accordance with the form given in appendix 5;
- .2 substantive documents should conclude with a summary of the action the relevant body is invited to take; and
- .3 information documents should conclude with a summary of the information contained therein.

To facilitate their processing, documents should be accompanied by computer diskettes, preferably in either WordPerfect or Microsoft Word, where available. Documents may also be submitted via the Internet as text or in WordPerfect or in Microsoft Word to IMO's e-mail address (i.e. "info@imo.org"). In such cases, documents should be confirmed by hard copies to facilitate processing of the document, i.e. attachment of annexes to main texts, and to check that none of the text has been garbled during sending or conversion.

39 Documents made available at IMO 13 weeks or more before a session should not be introduced in the plenary unless the Chairman decides that this is essential for the proper consideration of the matter concerned.

40 To indicate the importance of documents containing proposed amendments to maritime safety and protection of the marine environment-related IMO instruments approved for adoption by the MSC or the MEPC and to make them distinctive from other documents, such documents should be printed in pink colour.

41 Reports of the Committees and their subsidiary bodies should, in general, contain, under each section, only:

- .1 a summary of key documents and listing of other documents submitted by Governments, international organizations and the Secretariat;
- .2 a summary of views expressed, during consideration of an item, which may have influenced the decision taken by the reporting body (thus not allowing the reports to turn into summary records, and statements by delegations should be included therein only at their express request during the session); and
- .3 a record of the decisions taken.

42 In drafting recommendations, codes or guidelines, cross references may, whenever possible, be made to texts and terminology previously developed by IMO or other organizations. This will avoid

unnecessary duplication and will reduce the need for excessively detailed provisions and for subsequent harmonization.

43 Whenever possible, each subsidiary body should indicate in its report the progress made towards the target completion date set by the Committee(s) for each major item.

44 Chairmen of subsidiary bodies should not introduce their reports to the Committee(s) as these should be taken as read.

45 With respect to urgent matters emanating from subsidiary body meetings which have taken place less than 13 weeks before a session of the Committee, the Committee would consider only such urgent matters as may be specified by it at a prior session. As a general rule, the Committee would not consider reports or matters emanating from any subsidiary body meeting which has taken place less than 9 weeks prior to the Committee's session. In exceptional cases, a subsidiary body may invite the Committee to take action on a matter the subsidiary body considers to be urgent and important emanating from a meeting which took place less than 9 weeks prior to the Committee's meeting. In such cases, the subsidiary body Chairman should consult the Committee Chairman seeking the latter's approval of the contemplated action.

SUBMISSION OF DOCUMENTS

46 To ensure that all documents are available at IMO Headquarters in all three working languages well in time before a session of a Committee or subsidiary body, so as to enable the timely studying of documents and thus promoting the participation of all members in the decision-making process of the Committees and their subsidiary bodies, the following provisions should apply:

- .1 as a general rule, documents, other than information documents, should not contain more than 50 pages. In the case of reports from working, drafting or correspondence groups and in other exceptional circumstances, this number of pages may be exceeded, provided that the appropriate deadline for receipt of the documents by the Secretariat, as specified in subparagraphs .2 and .3 below, is put back by one week for every 20 pages exceeding 50 pages;
- .2 documents containing proposals for new work programme items should be received by the Secretariat not later than 20 weeks before the opening of any session of the Committee(s). They should be made available at IMO Headquarters, in the Organization's three working languages, not later than 12 weeks before the opening of the session;
- .3 documents (including information documents) containing more than 6 pages of text (bulky documents) should be received by the Secretariat not later than 13 weeks before the opening of any session of the Committees and their subsidiary bodies. They should be made available at IMO Headquarters, in the Organization's three working languages, except for information documents which should not be translated, not later than 5 weeks before the opening of the session;
- .4 non bulky documents commenting on those referred to in subparagraphs .2 and .3 above, or on items already on the agenda should be received by the Secretariat not later than

9 weeks before the opening of any session of the Committees and their subsidiary bodies. They should be made available at IMO Headquarters, in the Organization's three working languages, not later than 5 weeks before the opening of the session;

- .5 notwithstanding the provisions of subparagraph .4 above, documents commenting on those referred to in subparagraphs .2 and .3 above containing 4 pages or less should be processed if received by the Secretariat not later than 7 weeks before the opening of any session of the Committee and their subsidiary bodies. These documents should start with a paragraph clearly indicating the document on which comments are made and stating that the document is submitted in accordance with the provisions of paragraph 46.5 of the Guidelines on the organization and method of work of the MSC and the MEPC and their subsidiary bodies. They should be made available at IMO Headquarters, in the Organization's three working languages, not later than 4 weeks before the opening of the session;
- .6 non-bulky information documents should be received by the Secretariat not later than 9 weeks before the opening of any session of the Committees and their subsidiary bodies. They should not be translated and should be made available at IMO Headquarters not later than 5 weeks before the opening of the session. No action will be taken on the basis of an information paper only, other than to take note of it;
- .7 in addition and with reference to reports of subsidiary bodies on the basis of which the Committee(s) are normally invited to take action, every possible effort should be made that such reports are made available at IMO Headquarters, in the Organization's three working languages, not later than 5 weeks before the opening of the session; and
- .8 in the case of basic documents submitted to Committees reporting on urgent matters emanating from sessions of subsidiary bodies referred to in paragraph 45, which met less than 13 weeks before the Committees' meeting, such basic documents should annex the text (e.g. draft Assembly resolutions, draft MSC circulars, etc.) on which the Committee(s) will be invited to take action.

The Secretariat should strictly apply the rules concerning the submission of documents and not accept late submissions from Governments or delegations.

47 Any exemption from these provisions should have the prior authorization of the Chairman of the Committee concerned following consultations with the Secretariat. In emergency circumstances requiring immediate action by the Committee, a document to that end consisting of no more than 4 pages should be received by the Secretariat not later than 9 weeks before the opening of the session of the body concerned and made available at IMO Headquarters, in the Organization's three working languages, not later than 5 weeks before the opening of the session. Such a document will be considered by the Committee only if the Committee decides to do so at the opening of its session.

48 In the exceptional cases referred to in paragraph 45, when a subsidiary body invites the Committee to take action on urgent matters emanating from a subsidiary body's session which took place less than 13 weeks prior to the Committee's session, documents commenting on those urgent matters containing 4 pages or less should be processed if received by the Secretariat not later than 7 weeks before the opening of any session of the Committee concerned. Such documents should start with a paragraph

clearly indicating the document on which comments are made and stating that the document is submitted in accordance with the provisions of paragraph 48 of these Guidelines. They should be made available at IMO Headquarters, in the three working languages, not later than 4 weeks before the opening of the session.

OBSERVANCE OF THE GUIDELINES

49 These Guidelines should be observed strictly. This will assist delegations in preparing adequately for each meeting and enhance their participation in the debate and decision-making process during meetings. It will also avoid delegations experiencing difficulties when developing national positions on subjects on the agenda of the two Committees or their subsidiary bodies. In order to promote efficiency in the conduct of work overall, Committee members should ensure that their colleagues attending sessions of the other Committee are fully informed of the outcome of the meeting they have attended. Committee members should also ensure that their experts attending meetings of subsidiary bodies, working groups, drafting groups or correspondence groups are adequately informed and instructed on any action necessary to give effect to decisions made by the Committees.

APPENDIX 1

GUIDELINES ON THE ACCEPTANCE OF NEW WORK PROGRAMME ITEMS AND ESTABLISHMENT OF PRIORITIES IN THE WORK PROGRAMMES OF THE MSC AND MEPC AND THEIR SUBSIDIARY BODIES

Introduction

1 Through resolution A.777(18) the Assembly directed the Committees to assign priorities in their work programmes and strictly adhere to such priorities as well as to their Guidelines on work methods and organization of work and to inform the Council on the operation of these Guidelines.*

2 The first Joint MSC/MEPC session agreed that Guidelines on establishment of priorities should be worked out.

3 The establishment of priorities should be done in a two-tier process:

- .1 general acceptance; and
- .2 establishment of priorities.

General acceptance

4 Before deciding to include a new item in the work programme of an IMO body, the following factors should be taken into account:

- .1 has a need for the measure proposed been documented and, in case of proposals calling for new conventions or amendments to existing Conventions, has a compelling need been demonstrated?
- .2 is the subject addressed by the proposal considered to be within the scope of IMO's objectives?
- .3 do adequate industry standards exist or are they being developed thereby reducing the need for action within IMO?
- .4 do the benefits *vis-à-vis* enhanced maritime safety or protection of the marine environment expected to be derived from the inclusion of the new item proposed justify such action?
- .5 has the analysis of the issue sufficiently addressed the cost to the maritime industry as well as the relevant legislative and administrative burdens?
- .6 the achievability in the number of sessions.

* See operative paragraph 3 of resolution A.777(18) on Work methods and organization of work in committees and their subsidiary bodies.

Establishment of priorities

5 In deciding the priority of an item proposed for the work programme of the two Committees and their subsidiary bodies, a higher priority will be assigned to items that can be shown, or estimated, to have the greatest effect on safety of life, prevention of serious injury, protection of the marine environment and the highest ratio of benefit to be gained from the implementation of the proposal compared with the cost of its implementation. In addition, the following points should also be taken into account, where subparagraphs .1 to .6 below would indicate a higher priority and subparagraphs .7 to .9 would indicate a lower priority:

- .1 measures to promote the widest possible implementation and enforcement of IMO instruments by the shipping community as a whole;
- .2 measures aimed at substantially preventing maritime casualties or marine pollution incidents;
- .3 measures following a major maritime casualty involving substantial loss of life, significant injuries to persons or major marine pollution;
- .4 measures following a series of incidents causing or indicating risk of loss of life, significant injuries to persons or major marine pollution;
- .5 measures aimed at improving the safety and health of ships' crews or personnel;
- .6 measures to correct significant inadequacies identified in existing instruments;
- .7 measures necessary to align IMO rules and standards with those of other relevant international instruments and organizations;
- .8 measures required to take into account the introduction of new technology and methods in maritime transportation, including the carriage of new hazardous substances;
- .9 measures other than those referred to above.

6 Follow-up action in response to specific requests for action emanating from the Assembly and diplomatic conferences convened by IMO, UN conferences and bodies, regional intergovernmental conferences and other international and intergovernmental organizations, etc., should be evaluated in the light of paragraph 5 above, unless specifically identified as urgent matters.

7 Certain IMO activities are dictated by the need to take action on specific areas of maritime safety and environmental protection irrespective of any order of priority. Such activities concern work on subjects such as those listed below undertaken by the IMO body concerned:

- .1 amendments to the IMDG Code;
- .2 routeing of ships;
- .3 evaluation of safety and environmental hazards of chemicals; and

- .4 analysis of casualty statistics and analysis of maritime casualties and marine pollution incidents reported.

General remarks

8 When setting the priorities, a certain flexibility should be allowed for initiatives that cannot be foreseen.

9 Once a decision has been made on the basis of the above for a new item to be included in the work programme of an IMO body, an appropriate target completion date or the number of sessions needed for completion of the item, as appropriate, taking account of the importance and urgency of the matter concerned, should be established.

APPENDIX 2

GUIDELINES FOR CORRESPONDENCE GROUPS

Purpose

1 The purpose of establishing a correspondence group is to facilitate the consideration of an issue by a Committee or its subsidiary body on the basis of a consolidated draft text prepared by a "lead country" or the Secretariat through consultation with interested delegations by correspondence thereby decreasing the volume of papers submitted and processed.

Prerequisites

2 In addition to paragraphs 35 and 36 of these Guidelines, correspondence groups should only be established after the body concerned has agreed to consider the issue and has endorsed terms of reference for the group. The work of correspondence groups does not pre-empt formal consideration by the appropriate body of the positions taken by Governments or organizations.

Participation

3 Participation in correspondence groups is open to all delegations (Governments and organizations) which can provide the necessary expertise on a timely basis or which have a particular interest in the issue under consideration. Any Member Government or international organization can join in the work of the correspondence group subsequent to the establishment of the group and any contribution should be accepted at any stage of the work of the group.

Method of work

4 When establishing a correspondence group, a "lead country", "lead organization" or the Secretariat should be designated to co-ordinate the work of the group.

5 Responsibilities of group "leaders" should include:

- .1 preparation, maintenance and circulation of list of participants;
- .2 establishment of deadlines for the preparation of draft texts and receipt of comments and proposals thereon;
- .3 preparation and circulation of draft texts and comments thereon;
- .4 preparation and submission to the Secretariat (see paragraph 9 below) of the report of the correspondence group including any consolidated draft texts; and
- .5 introduction of the above-mentioned report and consolidated draft texts to the appropriate Committee or subsidiary body.

6 Responsibilities of participants should include:

- .1 if possible, active participation in the work of the group;
- .2 compliance with the deadlines established for the submission of comments on draft texts, proposals, etc.; and
- .3 relaying to other group members copies of comments, proposals, etc., submitted to the group "leader".

7 The responsibilities of the Secretariat, in those cases where the Secretariat acts as a group "leader", should be the same as those listed under paragraph 5 above. The Secretariat may also be requested to circulate consolidated draft texts, etc., on behalf of the group "leader".

Outcome of correspondence groups' work

8 The results of work carried out by correspondence groups should normally take the form of a consolidated draft text reflecting the information received from members of the group. Such texts should be accompanied by a succinct report summarizing the work and indicating which members have provided input to the process. Where it has not been possible to prepare an agreed consolidated draft document, texts or issues on which there was a disagreement should be clearly indicated in the draft document or the report as appropriate.

Submission of correspondence groups' reports

9 Correspondence groups' reports should be submitted to the first session of the parent body to meet following conclusion of the groups' work in time to meet the deadline established for consideration of substantive documents, in accordance with the provisions of paragraph 46. Normally the work of the correspondence groups should not overlap with sessions of the parent Committee or subsidiary body. In case the group has not finalized its work in time to meet such a deadline, a progress report should be made to the parent body.

APPENDIX 3

FORMAT FOR SUBMISSION OF PROPOSALS FOR THE INCLUSION OF NEW WORK PROGRAMME ITEMS

Documents containing proposals for the inclusion of new work programme items, should contain the following sections and the information required therein.

- 1 With regard to the information under paragraphs 18.1 and 18.2 of these Guidelines:
 - .1 scope of the proposal;
 - .2 need or compelling need, as required in paragraphs 18.1 and 18.2;
 - .3 analysis of the issues involved, having regard to both the costs to the maritime industry, as well as the associated legislative and administrative burdens, at global level;
 - .4 benefits which would accrue from the proposal;
 - .5 priority and target completion date; and
 - .6 specific indication of the action required including draft texts of the proposed requirements, if possible.
- 2 Remarks on the criteria for general acceptance, as provided in paragraph 4 of appendix 1:
 - .1 is the subject of the proposal within the scope of IMO's objectives?
 - .2 do adequate industry standards exist? and
 - .3 do the benefits justify the proposed action?
- 3 Identification of which committee/subsidiary body(ies) are essential to complete the work:
 - .1 estimation of the number of sessions needed to complete the work.

APPENDIX 4

SUBSIDIARY BODY AGENDA MANAGEMENT PROCEDURE

- 1 The principal objective of the Committees' and subsidiary bodies' work is to enhance safety and pollution prevention. Of paramount importance in the achievement of this objective are:
 - .1 the strict application of the Rules of Procedure of the two Committees and of the Guidelines on the organization and method of work; and
 - .2 the effective allocation of the available resources in the Committees' decision-making process.
- 2 Without impairing work on substantive safety and pollution prevention issues and, at the same time, keeping the volume of documentation at a reasonable level, the following should be pursued:
 - .1 the workload of each session of the subsidiary bodies should be reduced with a view to ensuring that they concentrate on important and urgent issues with sufficient time for their proper consideration and sound technical evaluation before decisions are made, thus maintaining the high level of performance expected by the Committees;
 - .2 the number and volume of documents to be considered by each subsidiary body session should be reduced to the extent possible;
 - .3 the workload of each subsidiary body session should be maintained at an appropriate manageable level ensuring high quality output within the available budget and resources. Information on the workload of the subsidiary bodies managed under the proposed procedure would facilitate relevant budgetary considerations; and
 - .4 the proliferation of correspondence groups, which was the result of an effort to manage the subsidiary bodies' increasing workload which could not be dealt with within meeting weeks, should be stopped and their numbers reduced to the absolute minimum.
- 3 When considering their work programmes and/or their provisional agendas for the following session, subsidiary bodies should seek the Committee(s) advice in the case of items for which no submissions have been received for two consecutive sessions.
- 4 In pursuing the above, the Committees and subsidiary bodies should be guided by the procedures and guidance for the selection of agenda items given in the attachment.

ATTACHMENT

PROCEDURES AND GUIDANCE FOR THE SELECTION OF AGENDA ITEMS

PROCEDURES

- 1 The provisional agenda of each subsidiary body session should include only selected agenda Items (SAIs), which should be selected from its work programme by the subsidiary body concerned and approved by the Committee(s), in accordance with the Guidance for the selection of agenda items set out in section 2.
- 2 Member Governments and international organizations should not, as a rule, submit any documents (except information documents) on work programme items which have not been included in the agenda of a particular subsidiary body session. However, if such documents are submitted, they should be issued as information documents and should be placed under the "Any other business" agenda item of the session concerned.
- 3 At each session, the subsidiary body should:
 - .1 only deal with SAIs; and
 - .2 prepare a provisional agenda for their next session by selecting items from their work programmes.
- 4 At each session, the MSC and the MEPC should, as appropriate:
 - .1 review the work programmes of the subsidiary bodies, assessing the work finalized, adding new items and adjusting target completion dates or the number of sessions needed for completion of items, as appropriate, and priorities, as necessary; and
 - .2 decide on the provisional agendas of the subsidiary bodies for their next sessions.
- 5 To avoid exceeding the agreed average number of 10 items on the subsidiary body's agendas by the addition of new items by either of the two Committees, the Committee Chairmen should consult each other and the Secretariat. As a result of such consultations, involving as necessary subsidiary body Chairmen, certain items may be deferred to the first subsequent session of the subsidiary body concerned.
- 6 To avoid overburdening the workload of subsidiary bodies, when they are invited to consider, in addition to those items on their agenda approved by the Committee(s), other items (usually placed under the "Any other business" item) requested by other subsidiary bodies to enable them to make progress on items on their agenda, the chairmen of the subsidiary bodies concerned should, as necessary, consult each other to find out whether and which of those items referred to above could be deferred to the first subsequent session of the subsidiary body concerned.

7 Notwithstanding the provisions of paragraphs 2 and 3 above, a subsidiary body may deal with exceptionally urgent matters which are not included in the SAIs, as provided in paragraph 27 of the Guidelines on the organization and method of work. In such cases, the following procedure should be followed:

- .1 Member Governments wishing to raise exceptionally urgent matters should, when submitting documents on such matters, expressly request that the special procedure provided in this paragraph be applied; and
- .2 the Chairman of the subsidiary body concerned, having carefully scrutinized the submitted proposal and having consulted the Secretary of the subsidiary body, should decide whether the proposal should be accepted.

GUIDANCE FOR THE SELECTION OF AGENDA ITEMS

8 Subsidiary bodies should select, from their work programme, SAIs in a manner which would ensure that proper consideration is given to important and urgent issues, taking into account:

- .1 the number of working days of each session; and
- .2 the number of working groups and drafting groups which the subsidiary body intends to establish.

9 SAIs should, in principle, be selected from high priority items first and, then, lower priority items included in the subsidiary bodies' work programmes, as approved by the Committee(s).

10 The total number of SAIs and the workload of the subsidiary bodies agendas should be kept at an appropriate manageable level ensuring high quality output. New item(s) should be included in the subsidiary bodies agendas only when existing agenda item(s) are completed and the capacity of the subsidiary body, allows the inclusion of new item(s) from the workload point of view, bearing in mind the workload reduction resulting from completed items.

11 The number of SAIs on the agenda of subsidiary bodies at any session should not, as an average, exceed 10, bearing in mind that the volume of the work under any item may vary largely.

12 The remaining work programme items not selected will be kept in abeyance and will be transferred to the agenda of the subsidiary body as and when selected by them and endorsed by the Committee(s) having regard to the overall workload of the subsidiary body(ies) responsible for the work in hand.

APPENDIX 5

STANDARD FORMAT FOR IMO DOCUMENTS

The text of all the documents should be preceded by a brief summary prepared in the form, and containing the information, as set out hereunder.

SUMMARY

- Executive summary:*** This description should be brief, outlining the proposed objective (an amendment, an Assembly resolution, a circular, information only, etc.), and include information on whether a proposal will have any financial implications for the shipping industry or for the IMO budget.
- Action to be taken:*** A reference should be made to the paragraph of the document which states the action to be taken by the Committee, subsidiary body, etc.
- Related documents:*** Other key documents should be listed to the extent they are known to the originator of the document.

ANNEX 18

WORK PROGRAMMES OF THE SUB-COMMITTEES

SUB-COMMITTEE ON BULK LIQUIDS AND GASES (BLG)

		Target completion date/number of sessions needed for completion	Reference
1	Evaluation of safety and pollution hazards of chemicals and preparation of consequential amendments	Continuous	BLG 1/20, section 3; BLG 4/18, section 11
2	Casualty analysis (co-ordinated by FSI)	Continuous	MSC 70/23, paragraphs 9.17 and 20.4
H.1	Additional safety measures for tankers		MSC 63/23, paragraph 18.4; BLG 4/18, section 3
	.1 revision of MSC/Circ.677	2001	
H.2	Tanker pump-room safety	2001	BLG 1/20, paragraphs 4.12 to 4.14; BLG 4/18, section 4
H.3	Matters related to the probabilistic methodology for oil outflow analysis	2001	BLG 1/20 paragraphs 8.7 to 8.11; BLG 4/18, section 5
H.4	Review of Annex I of MARPOL 73/78	2002	BLG 1/20, section 9; BLG 4/18, paragraph 15.2.5

Notes: 1 "H" means a high priority item and "L" means a low priority item. However, within the high and low priority groups, items have not been listed in any order of priority.

2 Items printed in bold have been selected for the provisional agendas for the forthcoming sessions of the Sub-Committees contained in annex 19.

Sub-Committee on Bulk Liquids and Gases (BLG) (continued)

		Target completion date/number of sessions needed for completion	Reference
H.5	Review of Annex II of MARPOL 73/78	2002	BLG 1/20, section 9; BLG 4/18, paragraph 15.2.5
H.6	Environmental and safety aspects of alternative tanker designs under MARPOL 73/78 regulation I/13F		BLG 3/18, paragraph 15.7
	.1 development of the final guidelines	2 sessions	BLG 1/20, paragraph 8.15
	.2 assessment of alternative tanker designs, if any	Continuous (as necessary)	BLG 1/20, section 16; BLG 4/18, paragraph 15.3
H.7	Requirements for personnel protection involved in the transportation of cargoes containing toxic substances in oil tankers	2 sessions	BLG 1/20, section 12; BLG 4/18, section 9
L.1	Development of guidelines for ships operating in ice-covered waters (co-ordinated by DE)	2001	MSC 68/23, paragraph 20.4; BLG 4/18, section 13; MSC 71/23, paragraph 20.43
L.2	Application of MARPOL requirements to FPSOs and FSUs	2001	MEPC 41/20, paragraph 7.7; MSC 69/22, paragraph 20.8.1; BLG 4/18, section 14
L.3	Amendments to requirements on electrical installations in the IBC and IGC Codes	2 sessions	MSC 71/23, paragraph 20.3

SUB-COMMITTEE ON DANGEROUS GOODS, SOLID CARGOES AND CONTAINERS (DSC)

		Target completion date/number of sessions needed for completion	Reference
1	Harmonization of the IMDG Code with the UN Recommendations on the Transport of Dangerous Goods	Continuous	MSC 63/23, paragraph 10.6
2	Reports on incidents involving dangerous goods or marine pollutants in packaged form on board ships or in port areas	Continuous	CDG 45/22, section 11 and paragraph 20.2
3	Amendments to the BC Code including evaluation of properties of solid bulk cargoes	Continuous	BC 34/17, section 3; DSC 2/16, paragraph 16.2.5.1
4	Casualty analysis (co-ordinated by FSI)	Continuous	MSC 70/23, paragraphs 9.17 and 20.4
H.1	Amendment 30-00 to the IMDG Code, its annexes and supplements (EmS, MFAG)	2000	DSC 3/15, paragraph 12.6; DSC 4/14, paragraph 11.4
H.2	Implementation of Annex III of MARPOL 73/78	2000	DSC 3/15, paragraph 12.6; DSC 4/14, paragraph 11.4
H.3	Revision of the format of the IMDG Code	2000	MSC 66/24, paragraph 9.15; DSC 4/14, paragraph 11.4

Sub-Committee on Dangerous Goods, Solid Cargoes and Containers (DSC) (continued)

		Target completion date/number of sessions needed for completion	Reference
H.4	Cargo Securing Manual	2000	MSC 66/24, paragraphs 9.34 and 21.34; DSC 4/14, paragraph 11.2
H.5	Implementation of IMO instruments and training requirements for cargo-related matters		
	.1 revision of resolution A.537(13)	2000	DSC 3/15, paragraph 12.5
	.2 development of an instrument for multimodal training requirements	2000	DSC 2/16, paragraph 13.10; DSC 4/14, paragraph 8.31
H.6	Revision of the Emergency Schedules (EmS)	2002	DSC 3/15, paragraph 3.2.21
H.7	Review of the BC Code	2002	DSC 3/15, paragraph 12.7
H.8	Ventilation requirements for packaged dangerous goods (in co-operation with FP)	2000	MSC 69/22, paragraph 20.16; DSC 4/14, paragraph 5.8
H.9	Amendments to SOLAS chapters VI and VII and MARPOL Annex III to make the IMDG Code mandatory	1 session	MSC 70/23, paragraph 20.6; MSC 71/23, paragraph 20.7
L.1	Guidelines for the development of shipboard emergency plans for marine pollutants	1 session*	CDG 42/22, section 9 and paragraph 20.2; DSC 2/16, paragraph 16.2.5.3

* To be decided by the MEPC.

SUB-COMMITTEE ON FIRE PROTECTION (FP)

		Target completion date/number of sessions needed for completion	Reference
1	Analysis of fire casualty records	Continuous	FP 43/18, section 12
H.1	Comprehensive review of SOLAS chapter II-2	2000	FP 43/18, section 3
H.2	Smoke control and ventilation	2000	FP 39/19, section 9
H.3	Fire-fighting systems in machinery and other spaces	2000	FP 38/24, paragraph 5.9; FP 43/18, paragraph 8.1
H.4	Recommendation on evacuation analysis for passenger ships and high-speed passenger craft	2002	FP 43/18, paragraphs 4.12 to 4.14
H.5	Use of asbestos on board ships	2000	MSC 68/23, paragraph 20.7; FP 43/18, section 6 and paragraph 15.3
H.6	Use of PFCs in shipboard fire-extinguishing systems	2000	MSC 69/22, paragraph 20.20 FP 43/18, section 13 and paragraph 15.3
H.7	Ventilation requirements for packaged dangerous goods (co-ordinated by DSC)	2000	MSC 69/22, paragraph 20.21; FP 43/18, section 14
H.8	Fixed fire detection and fire alarm systems	2001	MSC 71/23, paragraph 20.12
L.1	Role of the human element: revision of resolution A.654(16) on Graphical symbols for fire control plans	2000	FP 39/19, paragraphs 13.7 to 13.10; FP 43/18, section 11

Sub-Committee on Fire Protection (FP) (continued)

		Target completion date/number of sessions needed for completion	Reference
L.2	Fire test procedures: fire retardant materials for the construction of lifeboats	2000	FP 38/24, paragraph 2.5.3; FP 43/18, paragraph 15.3
L.3	Development of guidelines for ships operating in ice-covered waters (co-ordinated by DE)	2000	MSC 68/23, paragraph 20.4; FP 43/18, section 10 MSC 71/23, paragraph 20.43
L.4	Unified interpretations of SOLAS chapter II-2 and related fire test procedures	2000	FP 43/18, paragraphs 5.7, 7.25 and 15.3.5.1

SUB-COMMITTEE ON FLAG STATE IMPLEMENTATION (FSI)

		Target completion date/number of sessions needed for completion	Reference
1	Reporting on non-compliance with IMO instruments	Continuous	FSI 7/14, section 5
	.1 analysis and evaluation of deficiency reports and mandatory reports under MARPOL 73/78	Continuous	MSC 70/23, paragraph 20.12.1; FSI 7/14, section 5
2	Casualty statistics and investigations	Continuous	MSC 68/23, paragraphs 7.16 to 7.24; FSI 7/14, section 6
3	Port State control	Continuous	MSC 68/23, paragraphs 7.10 to 7.15; FSI 7/14, section 7
	.1 regional co-operation on port State control	Continuous	FSI 7/14, paragraphs 7.1 to 7.4
	.2 results of inspections	Continuous	FSI 7/14, paragraphs 7.1 to 7.4
	.3 mandatory reporting procedures on port State control detentions	2000	MSC 71/23, paragraph 20.16
	.4 PSC on seafarers' working hours	2 sessions	MSC 70/23, paragraph 20.12.3; FSI 7/14, paragraphs 7.11 to 7.13
4	Technical assistance	Continuous	MSC 68/23, paragraphs 12.1 to 12.7; FSI 6/12, section 8

Sub-Committee on Flag State Implementation (FSI) (continued)

		Target completion date/number of sessions needed for completion	Reference
5	Survey and certification	Continuous	FSI 6/12, section 4
	.1 guidelines for unscheduled inspections of ro-ro passenger ships	2000	MSC 68/23, paragraph 7.26; FSI 7/14, paragraphs 4.13 and 4.14
	.2 revision of Survey Guidelines (resolution A.746(18)) and Guidelines on surveys (resolution A.560(14))	2000	MSC 69/22, paragraph 10.9; FSI 6/12, paragraphs 4.4 to 4.8 and 4.18 to 4.21
	.3 service intervals of life-saving appliances and radiocommunication equipment	1 session	MSC 68/23, paragraph 20.30; MSC 69/22, paragraph 3.9; FSI 7/14, paragraphs 4.8 to 4.12
(L)	.4 introduction of the HSSC into MARPOL Annex VI on prevention of air pollution	2001	MEPC 41/20, paragraph 8.22.1; MSC 69/22, paragraph 20.28; FSI 7/14, paragraphs 4.6 and 4.7

Sub-Committee on Flag State Implementation (FSI) (continued)

		Target completion date/number of sessions needed for completion	Reference
H.1	Implementation of IMO instruments		
.1	responsibilities of Governments and measures to encourage flag State compliance	Continuous	MSC 68/23, paragraphs 7.2 to 7.8; FSI 7/14, section 3
.2	comprehensive analysis of difficulties encountered in the implementation of IMO instruments	2001	MSC 69/22, paragraph 20.28; FSI 7/14, paragraphs 3.3 and 3.4
.3	self-assessment of flag State performance	2001	MSC 70/23, paragraphs 9.2 to 9.14; FSI 7/14, paragraphs 3.20 to 3.27; MSC 71/23, paragraph 20.15
H.2	Implications arising when a vessel loses the right to fly the flag of a State	2001	MSC 68/23, paragraph 7.7; MSC 70/23, paragraph 22.12.4; FSI 7/14, section 9
H.3	Revision of the SOLAS expression "ships constructed"	2 sessions	MSC 71/23, paragraph 20.19

SUB-COMMITTEE ON RADIOCOMMUNICATIONS AND SEARCH AND RESCUE (COMSAR)

		Target completion date/number of sessions needed for completion	Reference
1	Global Maritime Distress and Safety System (GMDSS)		COMSAR 3/14, section 3
.1	matters relating to the GMDSS Master Plan	Continuous	COMSAR 3/14, section 3
.2	replies to questionnaire on casualties	Continuous	COMSAR 1/30, paragraphs 3.15 to 3.16
.3	exemptions from radio requirements	Continuous	COMSAR 1/30, paragraph 3.17
2	Promulgation of maritime safety information (MSI) (in co-operation with ITU, IHO, WMO and Inmarsat)		
.1	operational and technical co-ordination provisions of Maritime Safety Information (MSI) services	Continuous	COMSAR 3/14, section 3
3	ITU World Radiocommunication Conference matters	Continuous	COMSAR 3/14, section 6
4	Radiocommunication ITU-R Study Group 8 matters	Continuous	COMSAR 3/14, section 6
5	Satellite services (Inmarsat and COSPAS-SARSAT)	Continuous	COMSAR 3/14, section 7
6	Matters concerning search and rescue, including those related to the 1979 SAR Conference and the introduction of the GMDSS		
.1	harmonization of aeronautical and maritime search and rescue procedures, including SAR training matters	1999	COMSAR 3/14, section 9

Sub-Committee on Radiocommunications and Search and Rescue (COMSAR) (continued)

		Target completion date/number of sessions needed for completion	Reference
.2	plan for the provision of maritime SAR services, including procedures for routing distress information in the GMDSS	Continuous	COMSAR 3/14, section 9
.3	revision of the IAMSAR Manual	Continuous	COMSAR 2/13, section 9.3; MSC 71/23, paragraph 20.22
7	Emergency radiocommunications: false alerts and interference	1999	COMSAR 3/14, section 8
8	Casualty analysis (co-ordinated by FSI)	Continuous	MSC 70/23, paragraphs 9.17 and 20.4
H.1	Work consequential to the 1988 GMDSS Conference		MSC 66/24, paragraphs 10.6 to 10.8 and 21.52; COMSAR 1/30, section 4
.1	review of SOLAS regulation IV/15.7 and resolution A.702/(17) on Radio maintenance guidelines for the GMDSS related to sea areas A3 and A4	1999	COMSAR 1/30, paragraphs 4.32 to 4.36
.2	review of the locating functions in the GMDSS	1 session	COMSAR 1/30, paragraph 4.26
H.2	VTS and automatic ship identification transponder/transceiver systems (co-ordinated by NAV)	1 session	MSC 66/24, paragraph 21.24.2; COMSAR 1/30, paragraphs 8.6 to 8.8
H.3	IMO Standard Marine Communication Phrases (co-ordinated by NAV)	1 session	COMSAR 1/30, section 23; MSC 71/23, paragraph 20.26

Sub-Committee on Radiocommunications and Search and Rescue (COMSAR) (continued)

		Target completion date/number of sessions needed for completion	Reference
H.4	Ro-ro ferry safety: low-powered radio homing devices for liferafts (in co-operation with DE)	1999	MSC 66/24, paragraph 21.24.1; COMSAR 3/14, paragraph 5.5
H.5	Review of the Joint IMO/IHO/WMO MSI Manual	1 session	COMSAR 1/30, paragraph 5.9; COMSAR 3/14, paragraph 11.4.4.1
H.6	Revision of the HSC Code (co-ordinated by DE)	1999	MSC 66/24, paragraph 21.27; COMSAR 3/14, section 10
L.1	Safety of passenger submersible craft (co-ordinated by DE)	1 session	COMSAR 1/30, section 25
L.2	Development of guidelines for ships operating in ice-covered waters (co-ordinated by DE)	2000	MSC 68/23, paragraph 20.4; COMSAR 3/14, paragraph 11.4.5.2 MSC 71/23, paragraph 20.43
L.3	Development of criteria for general communications	2 sessions	COMSAR 3/14, paragraph 11.4.2.1; MSC 69/22, paragraph 20.36
L.4	Harmonization of GMDSS requirements for radio installations on board SOLAS ships	2 sessions	MSC 71/23, paragraph 20.23

SUB-COMMITTEE ON SAFETY OF NAVIGATION (NAV)

		Target completion date/number of sessions needed for completion	Reference
1	Routeing of ships, ship reporting and related matters	Continuous	MSC 69/22, paragraphs 5.2 to 5.62 and 20.41 to 20.42; NAV 44/14, section 3
2	ITU matters, including Radiocommunication ITU-R Study Group 8 matters	Continuous	MSC 69/22, paragraphs 5.69 to 5.70; NAV 44/14, paragraphs 8.1 to 8.5
3	Casualty analysis (co-ordinated by FSI)	Continuous	MSC 70/23, paragraphs 9.17 and 20.4
H.1	Revision of SOLAS chapter V	1999	MSC 69/22, paragraphs 5.71 to 5.73; NAV 44/14, paragraphs 5.1 to 5.38
H.2	Ergonomic criteria for bridge equipment and layout	1999	NAV 43/15, paragraphs 6.1 to 6.3; MSC 69/22, paragraphs 20.48, 21.32 and 21.39
H.3	IMO Standard Marine Communication Phrases (in co-operation with COMSAR and STW)	1 session*	MSC 68/23, paragraphs 2.3 to 2.5 MSC 71/23, paragraph 20.33
H.4	World-wide radio navigation system	2001	MSC 69/22, paragraphs 5.65 and 20.43; NAV 44/14, paragraphs 7.1 to 7.12

* The item is scheduled to be finalized in 2000

Sub-Committee on Safety of Navigation (NAV) (continued)

		Target completion date/number of sessions needed for completion	Reference
H.5	Performance standards for night vision equipment for high-speed craft	1999	MSC 68/23, paragraph 20.46; NAV 44/14, paragraphs 7.34 and 7.35
H.6	Amendments to the COLREGs	2000	MSC 69/22, paragraph 20.46; NAV 44/14, paragraphs 4.1 to 4.10;
H.7	Training and certification of maritime pilots and revision of resolution A.485(XII)(co-ordinated by STW)	1999	MSC 69/22, paragraph 20.47; NAV 44/14, paragraphs 13.7 to 13.9
H.8	Review of performance standards for shipborne satellite radionavigational receivers	2000	NAV 44/14, paragraph 7.2; MSC 70/23, paragraph 20.17.1
H.9	Performance standards for bridge watch alarms	2 sessions	MSC 71/23, paragraph 20.28
H.10	Revision of performance standards for devices to indicate speed and distance (resolution A.824(19))	1999	MSC 71/23, paragraph 20.32
L.1	Performance standards for navigation systems and equipment		NAV 44/14, paragraphs 7.26 to 7.35
.1	performance standards for daylight signalling lamps	1999	MSC 67/22, paragraph 19.25; NAV 44/14, paragraphs 7.34 to 7.35

Sub-Committee on Safety of Navigation (NAV) (continued)

		Target completion date/number of sessions needed for completion	Reference
L.2	Safety of passenger submersible craft (co-ordinated by DE)	1999	NAV 44/14, paragraphs 13.5 and 13.6
L.3	Development of guidelines for ships operating in ice-covered waters (co-ordinated by DE)	2000	MSC 69/22, paragraph 20.51; NAV 44/14, paragraphs 13.4 to 13.17; MSC 71/23, paragraph 20.43
L.4	Integrated bridge systems (IBS) operational aspects	2 sessions	NAV 44/14, paragraph 7.26; MSC 70/23, paragraph 20.17.2
L.5	User requirements for heading systems	1 session	NAV 44/14, paragraph 7.31; MSC 70/23, paragraph 20.17.3
L.6	Comprehensive review of chapter 13 of the HSC Code	2 sessions	NAV 44/14, paragraph 10.4; MSC 70/23, paragraph 20.17.4

SUB-COMMITTEE ON SHIP DESIGN AND EQUIPMENT (DE)

		Target completion date/number of sessions needed for completion	Reference
1	Casualty analysis (co-ordinated by FSI)	Continuous	MSC 70/23, paragraphs 9.17 and 20.4
H.1	Low-powered radio homing devices for liferafts on ro-ro passenger ships (co-ordinated by COMSAR)	2000	MSC 66/24, paragraph 21.24.1; DE 41/17, paragraph 4.4
H.2	Revision of the HSC Code (in co-operation with FP, COMSAR, NAV and SLF)	2000	MSC 66/24, paragraph 21.27; DE 42/15, paragraph 4.25
H.3	Asbestos-related problems on board ships (in co-operation with FP)	2000	MSC 68/23, paragraph 20.7; DE 42/15, paragraph 13.3
H.4	Development of guidelines for ships operating in ice-covered waters (in co-operation with BLG, FP, COMSAR, NAV, SLF, STW and MEPC)	2001	MSC 68/23, paragraph 20.4; DE 42/15, paragraph 14.6; MSC 71/23, paragraph 20.43
H.5	Guidelines under MARPOL Annex VI on prevention of air pollution from ships	2003	MEPC 41/20, paragraph 8.22.1; DE 42/15, section 10
	.1 guidelines on representative samples of the fuel delivered for use on board ships		
	.2 guidelines for on-board NOx monitoring and recording devices		

Sub-Committee on Ship Design and Equipment (DE) (continued)

		Target completion date/number of sessions needed for completion	Reference
H.6	Revision of resolutions MEPC.60(33) and A.586(14)	2002	MEPC 42/22, paragraph 15.7; DE 42/15, paragraphs 14.22 to 14.25
H.7	Amendments to resolution A.744(18)	2001	MSC 70/23, paragraphs 9.29 and 20.23; DE 42/15, paragraph 14.15
H.8	Use of desalinators on lifeboats and liferafts	2 sessions	MSC 71/23, paragraph 20.38
H.9	Safety aspects of water ballast management	1 session	MSC 71/23, paragraph 9.11
L.1	Development of requirements for wing-in-ground (WIG) craft	2000	DE 42/15, section 8
L.2	Safety of passenger submersible craft (in co-operation with FP, COMSAR, NAV and SLF)	2000	DE 42/15, paragraphs 14.10 to 14.12
L.3	International approval procedures for life-saving appliances	2000	DE 42/15, section 3
L.4	Improved thermal protection	2001	DE 42/15, paragraph 14.3; MSC 71/23, paragraph 20.36

Sub-Committee on Ship Design and Equipment (DE) (continued)

		Target completion date/number of sessions needed for completion	Reference
L.5	Guidelines under MARPOL Annex VI on prevention of air pollution from ships	2003	MEPC 41/20, paragraph 8.22.1; DE 42/15, paragraphs 10.2 to 10.4
	.1 guidelines on equivalent methods to reduce on-board NOx emission		
	.2 guidelines on on-board exhaust gas cleaning systems		
	.3 guidelines on other technological methods verifiable or enforceable to limit SOx emission		
L.6	Revision of the Interim Standards for ship manoeuvrability (resolution A.751(18))	2 sessions	MSC 71/23, paragraph 20.39
L.7	Amendments to SOLAS requirements on electrical installations	2 sessions	MSC 71/23, paragraph 20.45

SUB-COMMITTEE ON STABILITY AND LOAD LINES AND ON FISHING VESSELS SAFETY (SLF)

		Target completion date/number of sessions needed for completion	Reference
1	Analysis of intact stability casualty records	Continuous	SLF 30/18, paragraphs 4.16 and 4.17
2	Analysis of damage cards	Continuous	SLF 41/18, paragraph 17.5
3	Improved stability criteria and systematic model tests	Continuous	SLF 39/18, paragraph 15.4 and annex 7
H.1	Harmonization of damage stability provisions in IMO instruments (probabilistic method)		
	.1 development of the revised SOLAS chapter II-1 parts A, B and B-1	2001	SLF 42/18, section 3
	.2 development of explanatory notes for harmonized SOLAS chapter II-1 parts A, B and B-1	2 sessions	SLF 42/18, section 5; MSC 69/22, paragraph 20.60.1
H.2	Revision of technical regulations of the 1966 LL Convention	2000	SLF 42/18, section 4,
H.3	Revision of the fishing vessel Safety Code and Voluntary Guidelines	2001	SLF 42/18, section 7
H.4	Role of the human element		
	.1 damage consequence diagrams	2001	SLF 42/18, paragraph 6.8; MSC 71/23, paragraph 20.51

Sub-Committee on Stability and Load Lines and on Fishing Vessels Safety (SLF) (continued)

		Target completion date/number of sessions needed for completion	Reference
H.5	Revision of the HSC Code (co-ordinated by DE)	2000	MSC 66/24, paragraph 21.24; SLF 42/18, paragraphs 15.2.3.3
H.6	Amendments to the DSC Code : damage stability requirements for existing ro-ro passenger craft	2000	MSC 69/22, paragraph 20.60.2; SLF 42/18, section 9
H.7	Guidance for shipboard stability management	2000	MSC 69/22 paragraph 20.60.3; SLF 42/18, section 10
H.8	Safety aspects of ballast water management	1 session	MSC 71/23, paragraph 9.11
L.1	Harmonization of damage stability provisions in IMO instruments (probabilistic method)		SLF 41/18, section 13; MSC 65/25, paragraph 21.23
	.1 harmonization of damage stability provisions in other IMO instruments, including the 1993 Torremolinos Protocol	3 sessions	SLF 37/25, paragraph 22.2; MSC 65/25, paragraph 21.23; SLF 41/18, section 13
L.2	Development of guidelines for ships operating in ice-covered waters (co-ordinated by DE)	2000	MSC 68/23, paragraph 20.4; SLF 42/18, section 12; MSC 71/23, paragraph 20.43
L.3	Containership partially weathertight hatch covers	2000	MSC 68/23, paragraph 20.60; SLF 42/18, section 13
L.4	Review of the Intact Stability Code	Continuous	SLF 41/18, paragraph 3.14; MSC 69/22, paragraph 20.6

SUB-COMMITTEE ON STANDARDS OF TRAINING AND WATCHKEEPING (STW)

		Target completion date/number of sessions needed for completion	Reference
1	Validation of model training course content	Continuous	STW 29/14, paragraph 3.1
2	Casualty analysis (co-ordinated by FSI)	Continuous	MSC 70/23, paragraphs 9.17 and 20.4
H.1	Training and certification of maritime pilots and revision of resolution A.485(XII) (in co-operation with NAV)	2000	STW 29/14, paragraphs 7.46 to 7.49; MSC 69/22, paragraph 20.71
H.2	IMO Standard Marine Communication Phrases (co-ordinated by NAV)	2000	STW 28/20, section 7
H.3	Follow-up action to the 1995 STCW Conference [including:]		
.1	guidance regarding recognition of certificates (regulation I/10)	2002	STW 29/14, paragraph 7.51
.2	review of chapter VII	2002	
.3	clarification of STCW Convention and STCW Code provisions	2002	
.4	review of training-related resolutions and circulars with a view to revoking	2001	STW 30/13, paragraph 5.16
.5	guidance on the preparation and review of independent evaluations required by STCW regulation I/8 and section A-I/7 of the STCW Code, including possible action by the Committee	2001	STW 30/13, paragraph 5.12 MSC 71/23, paragraph 20.55.1.1
.6	guidance on arrangements between Parties to implement regulation I/10	2000	MSC 71/23, paragraph 20.55.1.2

Sub-Committee on Standards of Training and Watchkeeping (STW) (continued)

		Target completion date/number of sessions needed for completion	Reference
	.7 guidance on maintenance of records relating to basic training	2000	STW 30/13, paragraph 5.24; MSC 71/23, paragraph 20.55.1.3
H.4	Follow-up action to the 1995 STCW-F Conference [including:]		STW 29/14, paragraph 8.6
	.1 guidelines and recommendations based on the STCW Code specifically addressed to personnel on fishing vessels, including: <ul style="list-style-type: none"> - watchkeeping; and - prevention of fatigue (resolution 3) 	2000	STW 30/13, paragraphs 6.2 and 6.3
	.2 guidance on training, certification and watchkeeping standards for fishing vessel personnel serving on board large fishing vessels (resolution 6)	2000	
	.3 requirements for officers in charge of an engineering watch and watchkeeping provisions (resolution 7)	2000	
	.4 clarification of STCW-F Convention requirements	Continuous	
H.5	Unlawful practices associated with certificates of competency	2000	STW 30/13, paragraph 5.20; MSC 71/23, paragraph 20.55.2
H.6	Medical standards for seafarers	2000	MSC 69/22, paragraph 20.72
L.1	Development of guidelines for ships operating in ice-covered waters (co-ordinated by DE)	2000	MSC 68/23, paragraph 20.4 MSC 71/23, paragraph 20.43

Sub-Committee on Standards of Training and Watchkeeping (STW) (continued)

		Target completion date/number of sessions needed for completion	Reference
L.2	Development of requirements for training in ballast water management	2001	STW 30/13, paragraph 12.3; MSC 71/23, paragraph 20.55.3
L.3	Development of guidance on training in the use of ECDIS	2000	STW 30/13, paragraph 3.4 MSC 71/23, paragraph 20.55.4

ANNEX 19

**PROVISIONAL AGENDAS FOR THE FORTHCOMING SESSIONS
OF THE SUB-COMMITTEES***

SUB-COMMITTEE ON BULK LIQUIDS AND GASES (BLG) - 5th session

- Opening of the session
- 1 Adoption of the agenda
 - 2 Decisions of other IMO bodies
 - 3 Additional safety measures for tankers: revision of MSC/Circ.677
 - 4 Tanker pump-room safety
 - 5 Matters related to the probabilistic methodology for oil outflow analysis
 - 6 Review of Annex I of MARPOL 73/78
 - 7 Review of Annex II of MARPOL 73/78
 - 8 Evaluation of safety and pollution hazards of chemicals and preparation of consequential amendments
 - 9 Development of guidelines for ships operating in ice-covered waters
 - 10 Application of MARPOL requirements to FPSOs and FSUs
 - 11 Work programme and agenda for BLG 6
 - 12 Election of Chairman and Vice-Chairman for 2001
 - 13 Any other business
 - 14 Report to the Committees

* Agenda item numbers do not necessarily indicate priority.

SUB-COMMITTEE ON DANGEROUS GOODS, SOLID CARGOES AND CONTAINERS (DSC) - 5th session

- Opening of the session
- 1 Adoption of the agenda
 - 2 Decisions of other IMO bodies
 - 3 Amendments to the IMDG Code, its annexes and supplements (EmS, MFAG), including harmonization of the IMDG Code with the UN Recommendations on the Transport of Dangerous Goods
 - .1 amendment 30-00 to the IMDG Code, its annexes and supplements (EmS, MFAG)
 - .2 revision of the format of the IMDG Code
 - .3 implementation of Annex III of MARPOL 73/78
 - 4 Revision of the Emergency Schedules (EmS)
 - 5 Review of the BC Code, including evaluation of properties of solid bulk cargoes
 - 6 Matters related to the Cargo Security Manual
 - 7 Casualty and incident reports and analysis
 - 8 Implementation of IMO instruments and training requirements for cargo-related matters
 - .1 revision of resolution A.537(13)
 - .2 development of an instrument for multimodal training requirements
 - 9 Ventilation requirements for packaged dangerous goods
 - 10 Work programme and agenda for DSC 6
 - 11 Election of Chairman and Vice-Chairman for 2001
 - 12 Any other business
 - 13 Report to the Maritime Safety Committee

SUB-COMMITTEE ON FIRE PROTECTION (FP) - 44th session

- Opening of the session
- 1 Adoption of the agenda
 - 2 Decisions of other IMO bodies
 - 3 Recommendation on evacuation analysis for passenger ships and high-speed passenger craft
 - 4 Comprehensive review of SOLAS chapter II-2
 - 5 Smoke control and ventilation
 - 6 Unified interpretations to SOLAS chapter II-2 and related fire test procedures
 - 7 Ventilation requirements for packaged dangerous goods
 - 8 Fire test procedures: fire retardant materials for the construction of lifeboats
 - 9 Fire-fighting systems in machinery and other spaces
 - 10 Use of PFCs in shipboard fire-extinguishing systems
 - 11 Use of asbestos on board ships
 - 12 Development of guidelines for ships operating in ice-covered waters
 - 13 Analysis of fire casualty records
 - 14 Role of the human element: revision of resolution A.654(16) on Graphical symbols for fire control plans
 - 15 Fixed fire detection and fire alarm systems
 - 16 Work programme and agenda for FP 45
 - 17 Election of Chairman and Vice-Chairman for 2001
 - 18 Any other business
 - 19 Report to the Maritime Safety Committee

SUB-COMMITTEE ON FLAG STATE IMPLEMENTATION (FSI) - 8th session

- Opening of the session
- 1 Adoption of the agenda
 - 2 Decisions of other IMO bodies
 - 3 Responsibilities of Governments and measures to encourage flag State compliance
 - 4 Comprehensive analysis of difficulties encountered in the implementation of IMO instruments
 - 5 Self-assessment of flag State performance
 - 6 Implications arising when a vessel loses the right to fly the flag of a State
 - 7 Revision of Survey Guidelines (resolution A.746(18)) and Guidelines on surveys (resolution A.560(14))
 - 8 Guidelines for unscheduled inspections of ro-ro passenger ships
 - 9 Introduction of the HSSC into MARPOL Annex VI on prevention of air pollution
 - 10 Analysis and evaluation of deficiency reports and mandatory reports under MARPOL 73/78
 - 11 Casualty statistics and investigations
 - 12 Regional co-operation on port State control
 - 13 Results of inspections
 - 14 Mandatory reporting procedures on port State control detentions
 - 15 Technical assistance
 - 16 Work programme and agenda for FSI 9
 - 17 Election of Chairman and Vice-Chairman for 2001
 - 18 Any other business
 - 19 Report to the Committees

**SUB-COMMITTEE ON RADIOCOMMUNICATIONS AND SEARCH AND RESCUE (COMSAR) -
4th session**

- Opening of the session
- 1 Adoption of the agenda
- 2 Decisions of other IMO bodies
- 3 Global Maritime Distress and Safety System (GMDSS)
 - .1 matters relating to the GMDSS Master Plan
 - .2 review of SOLAS regulation IV/15.7 and resolution A.702(17) on Radio maintenance guidelines for the GMDSS related to sea areas A3 and A4
 - .3 operational and technical co-ordination provisions of Maritime Safety Information (MSI) services
 - .4 exemptions from radio requirements
- 4 Ro-ro ferry safety: low-powered radio homing devices for liferafts
- 5 ITU maritime radiocommunication matters
 - .1 Radiocommunication ITU-R Study Group 8
 - .2 ITU World Radiocommunication Conference
- 6 Satellite services (Inmarsat and COSPAS-SARSAT)
- 7 Emergency radiocommunications: false alerts and interference
- 8 Matters concerning search and rescue, including those related to the 1979 SAR Conference and the introduction of the GMDSS
 - .1 harmonization of aeronautical and maritime search and rescue procedures, including SAR training matters
 - .2 plan for the provision of maritime SAR services, including procedures for routeing distress information in the GMDSS
 - .3 revision of the IAMSAR manual
- 9 Revision of the HSC Code
- 10 Development of guidelines for ships operating in ice-covered waters
- 11 Work programme and agenda for COMSAR 5

- 12 Election of Chairman and Vice-Chairman for 2000
- 13 Any other business
- 14 Report to the Maritime Safety Committee

SUB-COMMITTEE ON SAFETY OF NAVIGATION (NAV) - 45th session

- Opening of the session
- 1 Adoption of the agenda
- 2 Decisions of other IMO bodies
- 3 Routeing of ships, ship reporting and related matters (including voyage planning)
- 4 Amendments to the COLREGs
- 5 Revision of SOLAS chapter V
- 6 Ergonomic criteria for bridge equipment and layout
- 7 Navigational aids and related matters
 - .1 world-wide radio navigation system
 - .2 review of performance standards for shipborne satellite radionavigational receivers
 - .3 performance standards for night vision equipment for high-speed craft
 - .4 performance standards for daylight signalling lamps
 - .5 revision of performance standards for devices to indicate speed and distance (resolution A.824(19))
- 8 ITU matters, including Radiocommunication ITU-R Study Group 8 matters
- 9 Training and certification of maritime pilots and revision of resolution A.485(XII)
- 10 Safety of passenger submersible craft
- 11 Work programme and agenda for NAV 46
- 12 Election of Chairman and Vice-Chairman for 2000
- 13 Any other business
- 14 Report to the Maritime Safety Committee

SUB-COMMITTEE ON SHIP DESIGN AND EQUIPMENT (DE) - 43rd session

- Opening of the session
- 1 Adoption of the agenda
 - 2 Decisions of other IMO bodies
 - 3 International approval procedures for life-saving appliances
 - 4 Revision of the HSC Code
 - 5 Casualty analysis
 - 6 Asbestos-related problems on board ships
 - 7 Low-powered radio homing devices for liferafts on ro-ro passenger ships
 - 8 Development of requirements for wing-in-ground (WIG) craft
 - 9 Improved thermal protection
 - 10 Guidelines under MARPOL Annex VI on prevention of air pollution from ships
 - .1 guidelines on representative samples of the fuel delivered for use on board ships
 - .2 guidelines for on-board NO_x monitoring and recording devices
 - 11 Revision of resolutions MEPC.60(33) and A.586(14)
 - 12 Development of guidelines for ships operating in ice-covered waters
 - 13 Amendments to resolution A.744(18)
 - 14 Safety of passenger submersible craft
 - 15 Election of Chairman and Vice-Chairman for 2001
 - 16 Work programme and agenda for DE 44
 - 17 Any other business
 - 18 Report to the Maritime Safety Committee

**SUB-COMMITTEE ON STABILITY AND LOAD LINES AND ON FISHING VESSELS SAFETY (SLF) -
43rd session**

- Opening of the session and election of Chairman for 2000
- 1 Adoption of the agenda
 - 2 Decisions of other IMO bodies
 - 3 Development of revised SOLAS chapter II-1 parts A, B and B-1
 - 4 Revision of technical regulations of the 1966 LL Convention
 - 5 Revision of the fishing vessel Safety Code and Voluntary Guidelines
 - 6 Revision of the HSC Code
 - 7 Damage consequence diagrams
 - 8 Amendments to the DSC Code: damage stability requirements for existing ro-ro passenger craft
 - 9 Guidance for shipboard stability management
 - 10 Development of guidelines for ships operating in ice-covered waters
 - 11 Containership partially weathertight hatch covers
 - 12 Work programme and agenda for SLF 44
 - 13 Election of Chairman and Vice-Chairman for 2001
 - 14 Any other business
 - 15 Report to the Maritime Safety Committee

SUB-COMMITTEE ON STANDARDS OF TRAINING AND WATCHKEEPING (STW) - 31st session

- Opening of the session
- 1 Adoption of the agenda
 - 2 Decisions of other IMO bodies
 - 3 Validation of model training course content
 - 4 Training and certification of maritime pilots and revision of resolution A.485(XII)
 - 5 Follow-up action to the 1995 STCW Conference
 - 6 Follow-up action to the 1995 STCW-F Conference
 - 7 Casualty analysis
 - 8 Development of guidance on training in the use of ECDIS
 - 9 Medical standards for seafarers
 - 10 IMO Standard Marine Communication Phrases
 - 11 Unlawful practices associated with certificates of competency
 - 12 Development of requirements for training in ballast water management
 - 13 Development of guidelines for ships operating in ice-covered waters
 - 14 Work programme and agenda for STW 32
 - 15 Election of Chairman and Vice-Chairman for 2001
 - 16 Any other business
 - 17 Report to the Maritime Safety Committee

ANNEX 20

LONG-TERM WORK PLAN OF THE COMMITTEE

The following is an indicative list of subjects for consideration by the Maritime Safety Committee, for the period up to 2006. This list is not exhaustive and the subjects are not listed in order of priority.

MARITIME SAFETY COMMITTEE

The items listed below marked with an asterisk are considered to be high priority items. The remainder should be considered as such, and work on them initiated accordingly, only after proposals substantiating their importance and urgency have been submitted and endorsed by the Committee or a compelling need to do so has been clearly established and the Committee has agreed that urgent action should be taken on them.

OBJECTIVES

1 Pursuant to the provisions of Articles 1 and 28 of the Convention on the International Maritime Organization, to encourage the general adoption of the highest practicable standards in respect of matters concerning maritime safety and efficiency of navigation, including any matter within the scope of the Organization, concerned with the construction and equipment of ships (and other marine vehicles), training and qualification of seafarers and fishing vessel personnel, manning of ships from a safety standpoint, aids to navigation, rules for the prevention of collisions, search and rescue, handling of cargoes, maritime safety procedures and requirements, hydrographic information, log-books and navigational records, marine casualty investigations, salvage and any other matter directly affecting maritime safety (e.g. fire safety, maritime communications and the safe transport of cargoes generally), and with due regard to the contents of resolutions A.500(XII) and A.777(18).

2 To provide the necessary machinery for performing any duties assigned to it and to maintain such close relationship with other bodies as may further the purposes of the Organization.

GENERAL SUBJECTS

- * 1 Implementation, enforcement, monitoring, technical interpretation and improvement of conventions, codes, recommendations and guidelines.
- * 2 Role of the human element in the prevention of maritime casualties and accidents.
- * 3 Promotion and maintenance of a safety culture.
- * 4 Shipboard and shore-based management for the safe operation of ships.
- * 5 Formal safety assessment.
- 6 Procedures for the control of ships, including deficiency reports.
- * 7 Casualty statistics and investigations into serious casualties.
- 8 Harmonization of survey and certification requirements.

- 9 Prevention of piracy and unlawful acts against ships.
- 10 Co-operation with the United Nations and other international bodies on matters of mutual interest.
- 11 Technical input in technical co-operation projects.

SPECIFIC SUBJECTS

Items related to ship's construction, equipment, machinery and electrical installations

- 1 Safety aspects of the design, construction, machinery, electrical installations, equipment and operation of specific types of ships.
- 2 Intact stability, subdivision, damage stability and load lines of ships.
- 3 Manoeuvrability of ships.
- 4 Matters pertaining to fire protection, detection and extinction, fire test procedures and other matters related to fire safety on board ships.
- 5 Safe evacuation, survival and recovery following maritime casualties or in case of distress.
- 6 Tonnage measurement of ships.
- 7 Safety-related aspects of fishing vessels.

Items related to navigation and radiocommunications

- 8 Measures to improve navigational safety, including ships' routing, requirements and standards for navigational aids (including the development of functional requirements of shipborne navigational systems and requirements), ship-reporting systems and vessel traffic services.
- 9 Monitoring the operation of the global maritime distress and safety system and other maritime radiocommunication matters (including maritime safety information, shipborne radio equipment and operational procedures) and the provision of maritime search and rescue services.

Items related to training, certification and watchkeeping

- 10 Training, watchkeeping and operational procedures for maritime personnel, including seafarers, fishing vessel personnel, maritime pilots, VTS operators, those responsible for maritime safety on mobile offshore units and shore-based port personnel.
- 11 Seafarers certificates of competency.

Items related to cargo handling

- 12 Safe handling and carriage by sea of solid and liquid bulk cargoes.
- 13 Safe handling and carriage of dangerous goods in packaged form, including portable tanks, unit loads, other cargo transport units, shipborne barges and intermediate bulk containers (IBCs).
- 14 Emergency procedures and safety measures for ships carrying dangerous goods, medical first aid in case of accidents involving dangerous goods, and the safe use of pesticides in ships.
- 15 Safe cargo stowage and securing and container safety matters.
- 16 Safety at the ship/port interface.
- 17 Transboundary movement of hazardous waste.

ANNEX 21**DRAFT ASSEMBLY RESOLUTION****INTERNATIONAL AERONAUTICAL AND MARITIME
SEARCH AND RESCUE MANUAL**

THE ASSEMBLY,

RECALLING Article 15(j) of the Convention on the International Maritime Organization concerning the functions of the Assembly in relation to regulations and guidelines concerning maritime safety,

NOTING that the Maritime Safety Committee, at its sixty-ninth session, approved the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual, jointly prepared by ICAO and IMO,

HAVING CONSIDERED the recommendation made by the Maritime Safety Committee at its seventy-first session,

1. ENDORSES the action taken by the Maritime Safety Committee in approving the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual;
2. ADOPTS the Procedures for amending and updating the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual, set out in the Annex to the present resolution ;
3. INVITES the International Civil Aviation Organization (ICAO) to ensure that any amendments to the IAMSAR Manual are agreed with the Organization prior to their adoption;
4. REQUESTS the Maritime Safety Committee to ensure that any proposed amendments to the IAMSAR Manual are agreed with ICAO prior to their adoption;
5. URGES Governments to use the guidelines provided in the IAMSAR Manual when establishing, developing and operating their search and rescue organizations;
6. URGES FURTHER Governments to bring the IAMSAR Manual to the attention of all personnel who may be involved in the provision of search and rescue services;
7. RECOMMENDS Governments to ensure that all ships entitled to fly the flag of their countries carry on board a copy of Volume 3 of the IAMSAR Manual;
8. REVOKES resolutions A.229(VII), A.387(X)* and A.439(XI).

* Resolution A.387(X) sets the procedure for amending and bringing up to date the Merchant Ship Search and Rescue Manual (MERSAR).

ANNEX

**PROCEDURES FOR AMENDING AND UPDATING
THE INTERNATIONAL AERONAUTICAL AND MARITIME SEARCH
AND RESCUE (IAMSAR) MANUAL**

- 1 The Maritime Safety Committee should receive and evaluate, through its subsidiary bodies, proposals for amendments and/or additions to the IAMSAR Manual.
- 2 Such proposals should be examined collectively, rather than individually when, in the Maritime Safety Committee's judgement, they are sufficient or of such importance as to warrant examination.
- 3 Amendments adopted by the Maritime Safety Committee shall become applicable twelve months after adoption. For amendments of a very urgent nature this period may be shortened at the discretion of the Committee.
- 4 The active participation of the appropriate specialized agencies and other bodies concerned should be sought according to the nature of the proposed amendments.
