



SUB-COMMITTEE ON SAFETY OF
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Agenda item 20

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DRAFT REPORT TO THE MARITIME SAFETY COMMITTEE

1 GENERAL

1.1 The Sub-Committee on Safety of Navigation held its fifty-sixth session from 26 to 30 July 2010 at the Headquarters of the Organization, under the chairmanship of Mr. J. M. Sollosi (United States). The Vice-Chairman, Mr. Raja Datuk Malik (Malaysia), was also present.

1.2 The session was attended by representatives of the following countries:

[ARGENTINA	GEORGIA
AUSTRALIA	GERMANY
AZERBAIJAN	GHANA
BAHAMAS	GREECE
BANGLADESH	ICELAND
BELGIUM	INDONESIA
BOLIVIA (PLURINATIONAL	IRELAND
STATE OF)	ITALY
BRAZIL	JAPAN
CANADA	KENYA
CHILE	LATVIA
CHINA	LIBERIA
COLOMBIA	LIBYAN ARAB JAMAHIRIYA
COOK ISLANDS	MALAYSIA
CROATIA	MALTA
CYPRUS	MARSHALL ISLANDS
DEMOCRATIC PEOPLE'S	MEXICO
REPUBLIC OF KOREA	NETHERLANDS
DENMARK	NIGERIA
ECUADOR	NORWAY
EGYPT	OMAN
FINLAND	PANAMA
FRANCE	PERU

PHILIPPINES
POLAND
REPUBLIC OF KOREA
RUSSIAN FEDERATION
SAUDI ARABIA
SENEGAL
SIERRA LEONE
SINGAPORE
SOUTH AFRICA
SPAIN
SWEDEN
THAILAND

TRINIDAD AND TOBAGO
TURKEY
TUVALU
UKRAINE
UNITED KINGDOM
UNITED REPUBLIC OF
TANZANIA
UNITED STATES
URUGUAY
VANUATU
VENEZUELA (BOLIVARIAN
REPUBLIC OF)

and of the following Associate Member of IMO:

HONG KONG, CHINA

1.3 The session was attended by representatives from the following United Nations and specialized agency:

WORLD METEOROLOGICAL ORGANIZATION (WMO)

1.4 The following intergovernmental and non-governmental organizations were also represented:

INTERNATIONAL HYDROGRAPHIC ORGANIZATION (IHO)
EUROPEAN COMMISSION (EC)
INTERNATIONAL MOBILE SATELLITE ORGANIZATION (IMSO)
INTERNATIONAL CHAMBER OF SHIPPING (ICS)
INTERNATIONAL ELECTROTECHNICAL COMMISSION (IEC)
INTERNATIONAL UNION OF MARINE INSURANCE (IUMI)
INTERNATIONAL TRANSPORT WORKERS' FEDERATION (ITF)
INTERNATIONAL ASSOCIATION OF MARINE AIDS TO NAVIGATION AND
LIGHTHOUSE AUTHORITIES (IALA)
COMITÉ INTERNATIONAL RADIO-MARITIME (CIRM)
BIMCO
INTERNATIONAL ASSOCIATION OF CLASSIFICATION SOCIETIES (IACS)
OIL COMPANIES INTERNATIONAL MARINE FORUM (OCIMF)
INTERNATIONAL MARITIME PILOTS' ASSOCIATION (IMPA)
INTERNATIONAL ASSOCIATION OF INSTITUTES OF NAVIGATION (IAIN)
INTERNATIONAL COUNCIL OF MARINE INDUSTRY ASSOCIATIONS (ICOMIA)
INTERNATIONAL FEDERATION OF SHIPMASTERS' ASSOCIATIONS (IFSMA)
INTERNATIONAL ASSOCIATION OF INDEPENDENT TANKER OWNERS
(INTERTANKO)
INTERNATIONAL MARITIME RESCUE FEDERATION (IMRF)
CRUISE LINES INTERNATIONAL ASSOCIATION (CLIA)
INTERNATIONAL SAILING FEDERATION (ISAF)
INTERNATIONAL MARINE CONTRACTORS ASSOCIATION (IMCA)
WORLD NUCLEAR TRANSPORT INSTITUTE (WNTI)
INTERNATIONAL HARBOUR MASTERS' ASSOCIATION (IHMA)
THE NAUTICAL INSTITUTE (NI)]

Opening address of the Secretary-General

1.5 The Secretary-General welcomed the participants and delivered his opening address, the full text of which is reproduced in document NAV 56/INF.17.

1.6 The Chairman, in responding to the Secretary-General's opening remarks, thanked him for highlighting the importance of honouring the seafarer. Therefore, it was equally important to remember the contributions that the men and women who pursue that noble profession made to society. The recent comprehensive review of the STCW Convention and Code had a direct link to the technological advancement in shipping, advances in e-navigation and the importance of adapting the technology to the needs of the seafarer and not forcing the seafarer to adapt to the technology. The Chairman also noted the reference to the environmental tragedy unfolding in the Gulf of Mexico. Whilst this incident was not necessarily related to navigation or shipping, nevertheless it focused the world's attention on offshore activities that were taking place in areas that were once the exclusive domain of seafarers but were now occupied by a variety of commercial activities. This called attention to the Sub-Committee's work on ships' routeing measures, in general, and particularly to the Sub-Committee's discussion on safety zones around artificial islands, installations and structures in the EEZ. The Chairman concluded by noting that the Sub-Committee had a heavy agenda ahead and it would endeavour to pursue its work in the usual IMO spirit including a renewed dedication to the seafarer. He further confirmed that the Secretary-General's guidance and recommendations would be taken into account in the deliberations of the Sub-Committee and its Working and Drafting groups.

2 DECISIONS OF OTHER IMO BODIES

2.1 The Sub-Committee noted, in general, decisions and comments pertaining to its work by A 26, STW 41, SLF 52, DE 53, COMSAR 14, FP 54 and MSC 87 (NAV 56/2 and NAV 56/2/1) and considered them under the appropriate agenda items.

Outcome of MSC 87

Consideration of the human element in the rule-making process

2.2 The Sub-Committee noted that MSC 87 had agreed that an appropriate amendment to the Committee's Guidelines (MSC-MEPC.1/Circ.2) would need to be developed at the next session of the Joint MSC/MEPC Working Group on the Human Element, scheduled to be convened at MSC 88, and invited Member Governments and international organizations to submit comments and proposals for consideration at its next session.

Formal Safety Assessment amendments to the FSA Guidelines and the guidance on the use of HEAP and FSA

2.3 The Sub-Committee further noted that:

- .1 MSC 87 had endorsed the FSA Experts Group's recommendation, based on its experience on the review of FSA studies, to further consider the FSA Guidelines and the Guidance on use of HEAP and FSA, with a view to future amendments. Subsequently, MSC 87 had agreed to establish a Correspondence Group on Formal Safety Assessment (FSA), under the coordination of Japan, and instructed it, taking into account the comments made and decisions taken by the Committee, based on documents MSC 87/18 (paragraphs 40 to 49) and MSC 87/WP.7 (paragraph 21), to:
 - .1 prepare draft revised FSA Guidelines (MSC/Circ.1023–MEPC/Circ.392, as amended);
 - .2 prepare draft revised Guidance on the use of HEAP and FSA relating to the review of FSA studies (MSC-MEPC.2/Circ.6); and
 - .3 submit the report to MSC 89.
- .2 MSC 87 had also observed that, since the review task assigned to the group was finalized at this session, the FSA Expert Group might need to be re-established at future sessions to review possible FSA studies to be submitted to the Organization, when instructed by the Committees.

Follow-up to the twenty-sixth session of the Assembly

2.4 The Sub-Committee also noted that MSC 87 had been requested by A 26:

- .1 in the context of resolution A.1012(26) – *High-level Action Plan of the Organization and priorities for the 2010-2011 biennium*:
 - .1.1 when reporting on its work to the Assembly at its twenty-seventh regular session and to the Council at its sessions during the 2010-2011 biennium, to ensure that it reports progress towards fulfilling the Organization's aims and objectives using the framework of the strategic directions, high-level actions and planned biennial outputs;

- .1.2 when considering proposals for unplanned outputs, to ensure that, in accordance with this resolution and the Committee's Guidelines on the organization and method of work, as appropriate, the issues to be addressed are those which fall within the scope of the Strategic Plan and the High-level Action Plan;
 - .1.3 to submit to the Council, for endorsement, the unplanned outputs the Committee may approve during the 2010-2011 biennium, for inclusion in the High-level Action Plan for that biennium;
 - .1.4 to ensure that the high-level actions and related outputs, especially those involving amendments to existing conventions (particularly those which have been in force for a short period) take fully into account the directives in resolution A.500(XII); and that due attention is given to the requirement that a well-documented compelling need must be demonstrated for the development and adoption of new or revised standards;
 - .1.5 to review and revise, during the 2010-2011 biennium, the Committee's Guidelines on the organization and method of work in the light of this resolution; and
 - .1.6 when making recommendations for Committee's biennial agendas, to bear in mind the desirability of not scheduling more than one diplomatic conference in each year, save in exceptional circumstances; and
- .2 in the context of resolution A.1013(26) – *Guidelines on the application of the Strategic Plan and the High-level Action Plan* to keep, to review and revise, during the 2010-2011 biennium, the Committee's Guidelines on the organization and method of work, taking account of the Guidelines on the application of the Strategic Plan and the High-level Action Plan.

3 ROUTEING OF SHIPS, SHIP REPORTING AND RELATED MATTERS

3.1 The Chairman recalled that NAV 51 supported a proposal of the previous Chairman, recommending that for future sessions of the Sub-Committee, a preliminary assessment of proposals would be made by the Chairman in consultation with the Secretariat and the Chairman of the Ships' Routeing Working Group. Such a preliminary assessment would follow the general criteria in MSC/Circ.1060 and MSC.1/Circ.1060/Add.1 and would not address the technical aspects of the proposal. The results of the assessment would then be made available to the Sub-Committee by means of a working paper.

3.2 The Chairman informed the Sub-Committee that accordingly, he had, in cooperation with the Secretariat, prepared document NAV 56/WP.1 outlining a preliminary assessment of the ships' routeing and ship reporting proposals. In general, the proposals were in conformity with the criteria outlined in MSC/Circ.1060 and MSC.1/Circ.1060/Add.1.

New Traffic Separation Schemes (TSSs)

New Traffic Separation Schemes "Off the western coast of Norway"

3.3 The Sub-Committee briefly considered a proposal by Norway (NAV 56/3/3) for the establishment of four new traffic separation schemes "Off the western coast of Norway".

New Traffic Separation Schemes "Off the southern coast of Norway"

3.4 The Sub-Committee briefly considered a proposal by Norway, Denmark and Sweden (NAV 56/3/4) for the establishment of four new traffic separation schemes "Off the southern coast of Norway".

Amendments to existing Traffic Separation Schemes (TSSs)

Amendments to the existing Traffic Separation Scheme "Off Feistein"

3.5 The Sub-Committee briefly considered a proposal by Norway (NAV 56/3/5) for the cancellation of the existing Traffic Separation Scheme "Off Feistein" because since 1979 considerable changes in traffic and traffic patterns had taken place.

Amendments to the existing Traffic Separation Scheme "In the Strait of Dover and adjacent waters"

3.6 The Sub-Committee briefly considered a proposal by France and the United Kingdom (NAV 56/3/8) to amend the "Warnings" section, paragraph 3 of the existing traffic

separation scheme "In the Strait of Dover and adjacent waters" intended to reduce risk and thus preserve navigational safety and protection of the marine environment.

Amendments to the existing Traffic Separation Scheme "Off the south-west coast of Iceland"

3.7 The Sub-Committee briefly considered a proposal by Iceland (NAV 56/3/12) to amend the "Notes" section, paragraph 1.1 relating to the existing Traffic Separation Scheme "Off the south-west coast of Iceland".

Routeing measures other than Traffic Separation Schemes (TSSs)

Establishment of four new Areas To Be Avoided in the Campeche Sound

3.8 The Sub-Committee briefly considered a proposal by Mexico (NAV 56/3) to establish four new Areas To Be Avoided in the Campeche Sound.

3.9 The Sub-Committee was of the view that the Mexican proposal had not been drafted sufficiently clearly and needed to be re-drafted. At MSC 87, the delegation of Mexico had been advised of this fact but no information/response has yet been forthcoming.

3.10 The delegation of Mexico informed the Sub-Committee that it had decided to withdraw its existing proposal (NAV 56/3) and would submit a suitably revised proposal for consideration by NAV 57 in June 2011.

Amendments to the Rules for Vessels Navigating through the Straits of Malacca and Singapore

3.11 The Sub-Committee briefly considered a proposal by Indonesia, Malaysia and Singapore (NAV 56/3/1) for amendments to the Rules for Vessels navigating through the Straits of Malacca and Singapore for the addition of a new Rule 12 and an Appendix relating to procedures for night signals to be displayed by vessels crossing the Traffic Separation Scheme (TSS) in the Singapore Strait.

3.12 There was a substantial exchange of views on the proposal by Indonesia, Malaysia and Singapore. The Sub-Committee was divided on the issue with some delegations stating that an FSA study and cost benefit analysis was necessary to assess the feasibility of the proposal whilst other delegations, recognizing the unique traffic characteristics of the Strait of Singapore, were of the view that it was a valid proposal and supported it, preferably if it was adopted universally.

Establishment of a new Area To Be Avoided in the Atlantic Ocean, off the coast of Ghana

3.13 The Sub-Committee briefly considered a proposal by Ghana (NAV 56/3/2) to establish a new Area To Be Avoided in the Atlantic Ocean, off the coast of Ghana.

Establishment of a new Deep-water route and an associated precautionary area in the approaches to the new port of King Abdullah Economic City Port (KAP Port) in the northern Red Sea

3.14 The Sub-Committee briefly considered a proposal by Saudi Arabia (NAV 56/3/9) to establish a new deep-water route and an associated precautionary area in the approaches to the new port of King Abdullah Economic City port (KAP Port) in the northern Red Sea.

Amendments to the existing eastern Area To Be Avoided, off the south-west coast of Iceland

3.15 The Sub-Committee briefly considered a proposal by Iceland (NAV 56/3/11) for amendments to the existing eastern Area To Be Avoided, off the south-west coast of Iceland. The amendment relates to the addition of a new paragraph 3 to the "Notes" section.

Amendments to the existing Deep-water route forming part of the "In the Strait of Dover and adjacent waters" Traffic Separation Scheme (TSS)

3.16 The Sub-Committee briefly considered a proposal by France and the United Kingdom (NAV 56/3/13) to amend the "Notes" section relating to "Warnings", paragraph 3 of the existing Deep-water route forming part of the "In the Strait of Dover and adjacent waters" Traffic Separation Scheme (TSS) intended to reduce risk and thus the preservation of navigational safety and protection of the marine environment.

Mandatory ship reporting systems**Establishment of a new mandatory ship reporting system "In the Sound between Denmark and Sweden" (SOUNDREP)**

3.17 The Sub-Committee briefly considered a proposal by Denmark and Sweden (NAV 56/3/7) to establish a new mandatory ship reporting system "In the Sound between Denmark and Sweden" (SOUNDREP). The aim of this proposed mandatory ship reporting system was to ensure a safe and efficient traffic flow in the Sound between Denmark and Sweden.

3.18 Some delegations had concerns regarding the extra burden the proposed new mandatory ship reporting system "In the Sound between Denmark and Sweden" (SOUNDREP) would impose on the officer of the watch. The majority of the delegations supported it, recognizing that Denmark and Sweden had proposed an automated reporting system based on the use of AIS technology and linked to both the Danish and Swedish national shore-based AIS network, which could continually receive messages broadcast by ships with transponders to gain information on their identity and position.

Amendments to the existing mandatory ship reporting system "In the Torres Strait region and the Inner Route of the Great Barrier Reef" (REEFREP)

3.19 The Sub-Committee briefly considered a proposal by Australia (NAV 56/3/6) for amending the existing mandatory ship reporting system "In the Torres Strait region and the Inner Route of the Great Barrier Reef" (REEFREP). This involved extension of the area covered by the existing mandatory ship reporting system.

Amendments to the existing mandatory ship reporting system "Off the south and south-west coast of Iceland" (TRANSREP)

3.20 The Sub-Committee briefly considered a proposal by Iceland (NAV 56/3/10) for amendments to the existing mandatory ship reporting system "Off the south and south-west coast of Iceland" (TRANSREP).

Review of adopted mandatory ship reporting systems

3.21 The Chairman recalled again that at previous sessions, his predecessor and subsequently himself took the initiative as Chairman to bring to the attention of Members the need for carrying out an evaluation of adopted mandatory ship reporting systems and had appealed to Members to undertake this exercise.

3.22 The Chairman stated that he was pleased that at least one Member Government had submitted the result of their experiences to this session of the Sub-Committee.

3.23 The Sub-Committee noted with appreciation the useful information provided by Denmark (NAV 56/INF.8) giving details of their experience gained with respect to the existing mandatory ship reporting "In the Storebælt (Great Belt) traffic area" (BELTREP).

3.24 The Chairman thanked Denmark for taking the initiative in carrying out this review and suggested once again that Members should undertake a similar review and

re-evaluation of their existing mandatory ship reporting systems and take action, as appropriate.

Proposed new routeing measures in the eastern part of the Gulf of Finland, off Rodsher and Gogland Islands

3.25 The Sub-Committee noted with interest the information provided by the Russian Federation (NAV 56/INF.5) giving details of amendments to the existing traffic separation scheme in the Gulf of Finland and new routeing measures which were planned to be implemented in the near future. All routeing measures were geographically located within the territorial sea of the Russian Federation.

Establishing the Ships' Routeing Working Group

3.26 After a preliminary discussion, as reported in paragraphs 3.1 to 3.23 above, the Sub-Committee re-established the Ships' Routeing Working Group and instructed it, taking into account any decisions of, and comments and proposals made in, Plenary as well as relevant decisions of other IMO bodies (item 2), to:

- .1 consider all documents submitted under agenda item 3, except NAV 56/3, regarding routeing of ships and related matters and prepare routeing and reporting measures, as appropriate, and recommendations for consideration and approval by Plenary;
- .2 consider all documents submitted under agenda item 4 regarding safety zones and prepare recommendations for consideration and approval by Plenary, in addition, review the issue with respect to the continued need for safety zones longer than 500 metres and provide proper justification and support for continuing work beyond 2010 including proposed TOR for a correspondence group to progress the issue;
- .3 consider the background weather information with respect to the status of the current seasonal zone, wind velocities/direction, wind data areas including routeing measures, proposed seasonal zone and wave heights and direction and provide comments and recommendations with respect to extending the Summer Load Line 50 miles southward off Cape Agulhas for consideration and approval by Plenary (agenda item 14);

- .4 take into account the role of the human element guidance as updated at MSC 75 (MSC 75/24, paragraph 15.7) including the Human Element Analysing Process (HEAP) given in MSC/Circ.878-MEPC/Circ.346 in all aspects of the items considered; and
- .5 submit a report to Plenary on Thursday, 29 July 2010 for consideration at Plenary.

Report of the Ships' Routeing Working Group

3.27 Having received and considered the Working Group's report (NAV 56/WP.3), the Sub-Committee approved it in general and, in particular (with reference to paragraphs 3.1 to 8.1 and annexes 1 to 13), took action as summarized hereunder.

[New Traffic Separation Schemes

New Traffic Separation Schemes "Off the western coast of Norway" and "Off the southern coast of Norway"

3.28 The Sub-Committee noted the discussions of the Working Group regarding the proposed new TSSs "Off the western coast of Norway" and "Off the southern coast of Norway", including recommended routes, and approved the new Traffic Separation Schemes "Off the western coast of Norway" and "Off the southern coast of Norway", as set out in annex [...], which the Committee is invited to adopt.

Amendments to existing Traffic Separation Schemes

Amendments to the existing Traffic Separation Scheme "Off Feistein"

3.29 The Sub-Committee approved the cancellation of the existing Traffic Separation Scheme "Off Feistein", which the Committee is invited to revoke.

Amendments to the existing Traffic Separation Scheme "In the Strait of Dover and adjacent waters"

3.30 The Sub-Committee approved the amendments to the existing Traffic Separation Scheme "In the Strait of Dover and adjacent waters", as set out in annex [...], which the Committee is invited to adopt.

Amendments to the existing Traffic Separation Scheme "Off the south-west coast of Iceland"

3.31 The Sub-Committee approved the amendments to the existing Traffic Separation Scheme "Off the south-west coast of Iceland", as set out in annex [...], which the Committee is invited to adopt.

Routeing measures other than Traffic Separation Schemes**Establishment of a new Area To Be Avoided in the Atlantic Ocean, off the coast of Ghana**

3.32 The Sub-Committee approved the establishment of a new Area To Be Avoided in the Atlantic Ocean, off the coast of Ghana, as set out in annex [...], which the Committee is invited to adopt.

Establishment of a new Deep-water route and an associated Precautionary area in the approaches to the new port of King Abdullah Port (KAP Port) in the northern Red Sea

3.33 The Sub-Committee approved the establishment of a new Deep-water route in the approaches to the new port of King Abdullah Port (KAP Port) in the northern Red Sea and a Precautionary area in the approaches to the new port of King Abdullah Port (KAP Port) in the northern Red Sea, as set out in annex [...], which the Committee is invited to adopt.

Amendments to the existing eastern Area To Be Avoided, off the south-west coast of Iceland

3.34 The Sub-Committee approved the amendments to the existing eastern Area To Be Avoided off the south-west coast of Iceland, as set out in annex [...], which the Committee is invited to adopt.

Amendments to the existing Deep-water route forming part of the "In the Strait of Dover and adjacent waters" Traffic Separation Scheme

3.35 The Sub-Committee approved the amendments to the existing Deep-water route forming part of the "In the Strait of Dover and adjacent waters" Traffic Separation Scheme, as set out in annex [...], which the Committee is invited to adopt.

Interim recommendatory measure in the Singapore Strait

3.36 The Sub-Committee noted the discussions of the Working Group on the proposal by Indonesia, Malaysia and Singapore (NAV 56/3/1) for amendments to the Rules for Vessels Navigating through the Straits of Malacca and Singapore and endorsed an Interim

recommendatory measure in the Singapore Strait, as set out in annex [...], which the Committee is invited to approve.

3.37 The Sub-Committee also invited Contracting Parties to the International Convention on Regulations for Prevention of Collisions at Sea (COLREG), if they so wished, to propose amendments in relation to the procedures for night signals to be displayed by vessels crossing Traffic Separation Schemes, following the provisions of Article VI of COLREG.

Implementation of new and amended Traffic Separation Schemes and other routeing measures

3.38 The new Traffic Separation Schemes and amendments to the existing Traffic Separation Schemes and other routeing measures mentioned in above paragraphs 3.28 to 3.35 will be implemented at a date, not less than six months after adoption by the Committee.

Mandatory ship reporting systems

Establishment of a new mandatory ship reporting system "In the Sound between Denmark and Sweden" (SOUNDREP)

3.39 The Sub-Committee approved a new mandatory ship reporting system "In the Sound between Denmark and Sweden" (SOUNDREP), as set out in annex [...], which the Committee is invited to adopt.

Amendments to the existing mandatory ship reporting system "In the Torres Strait region and the Inner Route of the Great Barrier Reef" (REEFREP)

3.40 The Sub-Committee approved the amendments to the existing mandatory ship reporting system "In the Torres Strait region and the Inner Route of the Great Barrier Reef" (REEFREP), as set out in annex [...], which the Committee is invited to adopt.

Amendments to the existing mandatory ship reporting system "Off the south and south-west coast of Iceland" (TRANSREP)

3.41 The Sub-Committee approved the amendments to the existing mandatory ship reporting system "Off the south and south-west coast of Iceland" (TRANSREP), as set out in annex [...], which the Committee is invited to adopt.

Implementation of new and amended Mandatory Ship Reporting Systems

3.42 The new Mandatory Ship Reporting System and amendments to the existing Mandatory Ship Reporting Systems mentioned in above paragraphs 3.39 to 3.41 will be implemented at a date, not less than six months after adoption by the Committee.]

4 GUIDELINES FOR CONSIDERATION OF REQUESTS FOR SAFETY ZONES LARGER THAN 500 METRES AROUND ARTIFICIAL ISLANDS, INSTALLATIONS AND STRUCTURES IN THE EEZ

4.1 The Sub-Committee recalled that NAV 53 had considered a proposal by Brazil (NAV 53/3) supplemented by a study carried out by DNV and PETROBRAS (NAV 53/INF.2), which aimed at designating an Area To Be Avoided in waters off the Brazilian south-east coast, in the Campos Basin region, in order to reduce the risk of collision in an area with a high concentration of oil rigs, production systems and FPSOs. Part of the proposal was to extend the safety zones around the units which constituted this oil production system to a distance greater than 500 metres, taking into consideration the peculiarities of each one of them, with a view to avoiding environmental damage caused by any collision of a vessel. There was general support for the proposal by Brazil, but some delegations were concerned by the extension of the designated safety zones to more than 500 metres, noting that there were no established procedures and guidelines for determining if any such extension was warranted. It was therefore proposed that the Sub-Committee should develop uniform procedures, and guidelines by which safety zone proposals for distances greater than 500 metres should be considered. Otherwise, the Sub-Committee might find itself having to consider proposals for safety zones greater than 500 metres on an *ad hoc* basis without guidelines, standards or objective measures by which to make a judgement. The development of uniform procedures would, therefore, ensure that safety of navigation was taken consistently into account and that the size of any adopted safety zone was no larger than the minimum necessary to achieve safety of navigation.

4.2 The Sub-Committee also recalled that NAV 53 had subsequently approved the proposed new Area To Be Avoided "Off the Brazilian south-east coast, in the Campos Basin region" and observed that the majority of the Ships' Routeing Working Group had recommended that the Sub-Committee should invite the Committee to establish a high-priority work programme item on the development of guidelines, principles and standards for the evaluation extended safety zones larger than 500 metres, which is the limit provided for in UNCLOS. UNCLOS Article 60(5) provides, *inter alia*, that such safety zones "shall not exceed a distance of 500 metres around them, measured from each point of their

outer edge, except ... as recommended by the competent international organization", which is understood to mean the Organization.

4.3 The Sub-Committee further recalled that MSC 84 had subsequently considered document MSC 84/22/4 (Brazil and the United States), proposing to develop comprehensive guidelines for the consideration of requests for safety zones larger than 500 metres in Exclusive Economic Zones and to provide an example of such guidelines, and agreed to include, in the work programme of the NAV Sub-Committee, a high-priority item on "Guidelines for consideration of requests for safety zones larger than 500 metres around artificial islands, installations and structures in the EEZ", with two sessions needed to complete the item. In this regard, MSC 84 noted the views of several delegations that other issues (e.g., safety zones around offshore wind farms, notification areas, etc.) should be considered under this new work item and instructed the Sub-Committee to take these views into account.

4.4 Although no proposals had been submitted to NAV 55, the Sub-Committee, recognizing that this was a high-priority item, had decided to proceed on this issue without delay and established a correspondence group to work intersessionally and report to NAV 56. Members were invited to submit relevant proposals for consideration at NAV 56.

4.5 The Sub-Committee briefly considered document NAV 56/4 (United Kingdom) summarizing the work and recommendations of the Correspondence Group regarding the development of Guidelines and inviting the Sub-Committee to consider two options, namely:

- .1 approve the draft amendments to the General Provisions on Ships' Routeing (resolution A.572(14)), as amended, relating to the proposed Guidelines and forward them to the Committee for adoption (NAV 56/4, annex 1); and
- .2 consider as an alternative or supplement to the above a draft SN circular on "Safety zones and safety of navigation around offshore installations and structures" (NAV 56/4, annex 2).

4.6 The Sub-Committee briefly considered document NAV 56/4/1 (United States) providing comments on the report of the Correspondence Group. The delegation of the United States recalled that they had been one of the proponents for the development of

these guidelines. After careful and thorough consideration, the United States believed there was no demonstrated need, at present, for safety zones larger than 500 metres or the development of guidelines for such safety zones. Rather than continuing the work to develop guidelines, the Sub-Committee should focus instead on the Organization's existing guidance on safety zones that perhaps had not been followed over time and on the available measures that individually or in combination with others had demonstrated their effectiveness in providing for the safety both of navigation and of artificial islands, installations or structures in the exclusive economic zone.

Finally, important questions about the nature of these expanded safety zones and the mechanism for adopting new guidelines had arisen but had not been answered in the course of the Correspondence Group's work. Some participants had observed that safety zones were not actually routeing measures and, thus, might not be a proper subject to include in the General Provisions on Ships' Routeing (GPSR).

As such, rather than developing guidelines in a new Annex to the GPSR, the United States proposed an appropriate SN circular pertaining to safety zones and the safety of navigation around offshore installations and structures which attempted to capture the important points and observations that the Group made in its work and was intended to be a way to provide guidance.

4.7 The Sub-Committee briefly considered document NAV 56/4/2 (ISAF) providing general comments on the Guidelines proposed by the Correspondence Group. ISAF was of the view that in the wider interests of all ships including small vessels the needs of such classes of ships must be fully considered in each application, their representatives consulted, and exclusion recommended only when there is a compelling safety case.

4.8 The Chairman invited the Sub-Committee to provide general comments on the issue and specific comments on any of the recommendations of the Correspondence Group.

4.9 Several delegations spoke on the issue. Some delegations were in favour of amending the General Provisions on Ships' Routeing (GPSR) whilst the majority were of the opinion that safety zones were not routeing measures and should therefore not be addressed under GPSR. A majority were also of the view that an SN circular would be the more appropriate way to address the issue. However, it was also recognized that the need for extension of safety zones beyond 500 metres might be necessary in the future due to the

unique nature of offshore installations, wind farms, aqua culture sites and energy exploitation activities.

4.10 At the invitation of the Chairman, the representative of the Legal Office offered observations concerning the procedural aspects of the Organization's role in accommodating safety zones of over 500 metres around artificial islands, installations and structures. He noted that article 60(5) of UNCLOS offered two options by providing that such safety zones shall not exceed a distance of 500 metres, except (a) "as authorized by generally accepted international standards", or (b) "as recommended by the competent international organization". Neither of these options referred to an "adoption" procedure. This could be distinguished from other UNCLOS provisions which require an adoption process (such as article 53(9) for archipelagic sea lanes; and article 41(4) for sea lanes and traffic separation schemes). It could also be compared to article 60(3) concerning the Organization's role in establishing international standards for removal of abandoned or disused platforms which did not require an adoption process (see resolution A.672(16)).

As a legal basis for an adoption procedure, reference could be made to other international instruments such as SOLAS regulation V/10 on ships' routeing (along with COLREG's Rule 10 for TSS's); however, in order for the adoption of safety zones to be encompassed within SOLAS regulation V/10, it would be necessary for the Parties to SOLAS to agree that such zones fell within the term "routeing systems". This did not historically seem to be the case. Safety zones had primarily been used as a measure to protect the safety of the offshore installation, and a clear distinction had been made between such zones and routeing systems (see resolution A.671(16), operative paragraph 1(c)). No reference had been made to SOLAS regulation V/10 in the draft guidelines being proposed in document NAV 56/4 to address enlarged safety zones. In the view of the Legal Office representative, the Organization should avoid an "adoption" processes using mandatory language such as "shall" except where an adoption was required by UNCLOS or another convention.

4.11 Following debate, the Sub-Committee referred documents NAV 56/4, NAV 56/4/1 and NAV 56/4/2 to the Ships' Routeing Working Group for consideration and advice.

Report of the Ships' Routeing Working Group

4.12 Having received and considered the Ships' Routeing Working Group's report (NAV 56/WP.3), the Sub-Committee (with reference to paragraphs 9.1 to 9.5 and annex 14) took action as summarized hereunder.

[4.13 The Sub-Committee agreed to a draft SN circular on Guidelines for safety zones and safety of navigation around offshore installations and structures, as set out in annex [...], which the Committee is invited to approve.

4.14 The Sub-Committee also invited the International Hydrographic Organization to note the contents of the above draft SN circular, in particular, paragraphs 4.1.3 and 4.1.4, relating to the use of legends, symbols and notes recommended for the standard representation on navigation charts for the designation of safety zones around offshore artificial islands, structures or installations, as well as for development areas and anchors and cables, as a warning to mariners navigating in the vicinity of offshore resource and exploitation areas.

4.15 The Sub-Committee further noted that there was no demonstrated need, at present, to establish safety zones larger than 500 metres around artificial islands, installations and structures in the exclusive economic zone or to develop guidelines to do so and that the continuation of the work beyond 2010 for a Correspondence Group on Safety Zones was, at present, no longer necessary.

4.16 The Committee was invited to consequently delete the item "Guidelines for consideration of requests for safety zones larger than 500 metres around artificial islands, installations and structures in the EEZ" from the Sub-Committee's biennial agenda, as the work on this item had been completed.]

5 AMENDMENTS TO THE PERFORMANCE STANDARDS FOR VDR AND S-VDR

5.1 The Sub-Committee recalled that MSC 83 had considered:

- .1 document MSC 83/25/4, wherein Germany proposed an improvement of the VDR performance standard since the evaluation of data retrieved from existing VDR installations had shown that in many cases the audio recordings were of bad quality and sensor signals were not recorded because the sensor failure had not been recognized during operation, which had, in certain cases, made it impossible to use the stored data for the intended purpose;
- .2 documents MSC 83/25/8 and MSC 83/25/9, in which Egypt had proposed that a second radar, a second VHF radio and closed-circuit TV (CCTV)

cameras should be connected to the voyage data recorder (VDR) and new design requirements to facilitate VDR capsule retrieval during recovery operations, should be developed respectively;

- .3 document MSC 83/25/18, in which India, commenting on the proposal by Egypt (MSC 83/25/9), provided further information on ways to improve VDR capsule retrieval during recovery operations,

and agreed to include, in the work programme of the Sub-Committee, a high-priority item on "Amendments to the Performance standards for VDR and S-VDR", with two sessions needed to complete the item, and referred the aforementioned documents to the Sub-Committee for detailed consideration.

5.2 The Sub-Committee further recalled that MSC 84 had also agreed to expand the existing work programme item on "Amendments to the Performance standards for VDR and S-VDR" to consider the proposal contained in document MSC 84/22/18 (Egypt), and increased the number of sessions needed to complete this work item to three sessions.

5.3 The Sub-Committee also recalled that NAV 55 had prepared a draft text of revised performance standards for voyage data recorders (VDRs) (NAV 55/WP.4, annex 4, as amended) and concurred that only the existing performance standards for VDRs needed to be amended as the proposed amendments were not intended to be retroactive. Secondly, since the performance Standard for S-VDRs (resolution MSC.163(78)) would not apply after 1 July 2010, no changes were proposed to the performance standards for S-VDRs.

5.4 The Sub-Committee considered document NAV 56/5 (Germany) containing the draft amended performance standards for shipborne voyage data recorders (VDRs), taking into account the issues highlighted by NAV 55 (NAV 55/21, paragraphs 16.17.1 to 16.17.7).

5.5 The delegation of the United Kingdom welcomed Germany's work on the development of draft amended performance standards for shipborne voyage data recorders (VDRs) which had also taken into account the work done at NAV 55 by the Technical Working Group (NAV 55/WP.4, annex 4) with respect to the float-free capsule.

5.6 There was general support for the German proposal. Some delegations were of the opinion that a cost-benefit analysis should also be undertaken. Other delegations were of

the view that the amended performance standards should not apply retroactively but only to new ships.

5.7 The Sub-Committee agreed to refer document NAV 56/5 to the Technical Working Group for further development/finalization with a view to approval by Plenary.

Establishing the Technical Working Group

5.8 Having also considered agenda items 6 and 7, which were deemed to be within its remit, the Sub-Committee re-established the Technical Working Group and instructed it to consider all relevant documents submitted under these agenda items and, taking into account any decisions of, and comments and proposals made in, Plenary, undertake the following tasks:

- .1 consider documents NAV 56/5 and further develop/finalize revised performance standards for VDR (resolution A.861(20)), taking into account document NAV 55/WP.4, section 4 and annex 4 (agenda item 5);
- .2 consider document NAV 55/21, annex 9 and the relevant outcome of COMSAR 14 and finalize a draft MSC circular on Guidance on procedures for updating shipborne navigation and communication equipment (agenda item 6);
- .3 consider document NAV 56/6 and finalize a draft SN circular on Maintenance of Electronic Chart Display and Information System (ECDIS) software and provide comments to address subsequent updating of the guidance (agenda item 6);
- .4 consider document NAV 56/7 and develop a liaison statement to ITU, concerning definitions of the Navigation Status parameter of AIS Messages 1, 2, and 3, as appropriate (agenda item 7);
- .5 develop a liaison statement to ITU based on the decision of MSC 87 (MSC 87/26, paragraphs 9.20 to 9.21), inviting ITU to incorporate AIS Application-Specific messages as given in SN.1/Circ.289, as deemed appropriate, within their technical standards; and develop clarifying

guidance on technical implementation, should the need arise (agenda item 7);

- .6 take into account the role of the human element guidance as updated at MSC 75 (MSC 75/24, paragraph 15.7) including the Human Element Analysing Process (HEAP) given in MSC/Circ.878-MEPC/Circ.346 in all aspects of the items considered; and
- .7 submit a report to Plenary on Thursday, 29 July 2010 for consideration at Plenary.

Report of the Technical Working Group

5.9 Having received and considered the Technical Working Group's report (NAV 56/WP.4), the Sub-Committee (with reference to paragraphs 3.1 to 3.12 and annexes 1 and 2) took action as summarized hereunder.

5.10 The Sub-Committee invited:

- .1 members and interested parties to submit more information on initial and operational costs of voyage data recorders (VDRs) in order to justify whether a float-free recording medium, in addition to a fixed recording medium, should be included in the performance standards; and
- .2 members to submit proposals on the revised performance standards for VDRs to the next session of the Sub-Committee with the view to finalizing them at that session, noting that the draft amended recommendation on performance standards for voyage data recorders (VDRs) was set out in annex 2 to document NAV 56/WP.4/Rev.1.

6 DEVELOPMENT OF PROCEDURES FOR UPDATING SHIPBORNE NAVIGATION AND COMMUNICATION EQUIPMENT

6.1 The Sub-Committee recalled that MSC 83 had considered document MSC 83/25/7 (Australia and the United Kingdom), proposing to develop, in view of the increasing complexity of processor-based electronic systems, formal procedures to address firmware, operating systems and software updates for shipborne navigation and communication systems and equipment, and agreed to include, in the work programmes of the NAV and

COMSAR Sub-Committees, a high-priority item on "Development of procedures for updating shipborne navigation and communication equipment", with two sessions needed to complete the item, and assigned the Sub-Committee as a coordinator.

6.2 The Sub-Committee also recalled that NAV 55 had considered document NAV 55/7 (CIRM) providing comments on the consideration given in document MSC 83/25/7 and suggesting that SN.1/Circ.266, providing guidance on the maintenance of ECDIS software, was appropriate to be used as a model in general for updating shipborne navigation and communication equipment and address firmware, operating systems and software updates for shipborne navigation and communication equipment.

6.3 The Sub-Committee further recalled that NAV 55 had further endorsed a draft MSC circular on Guidance on procedures for updating shipborne navigation and communication equipment (NAV 55/21, annex 9), for review/comments by COMSAR 14 and a final review by NAV 56 prior to approval by MSC 88.

6.4 The Sub-Committee noted that COMSAR 14 had endorsed the draft MSC circular with the following comments:

- .1 a minor amendment to insert the following words "and firmware" after the word "software" in the second line of paragraph 1 of the draft circular; and
- .2 footnotes to be included in SOLAS chapter IV, regulation 15.5 and chapter V, regulation 16, given below:
 - .1 in chapter IV, regulation 15.5, add footnote: "Refer to Guidance on Procedures for Updating Shipborne Navigation and Communication Equipment (MSC.1/Circ.[...])"; and
 - .2 in chapter V, regulation 16, add footnote: "Refer to Maintenance of Electronic Chart Display and Information System (ECDIS) Software (SN.1/Circ.266), and Guidance on Procedures for Updating Shipborne Navigation and Communication Equipment (MSC.1/Circ.[...])",

and instructed the Secretariat to inform NAV 56 accordingly for consideration and action, as appropriate.

6.5 The Sub-Committee observed that MSC 87 had noted the progress made and the comments by COMSAR 14.

6.6 The Sub-Committee considered document NAV 56/6 (IHO and CIRM) proposing amendment to SN.1/Circ.266 regarding the maintenance of ECDIS software.

6.7 The Sub-Committee agreed to refer documents NAV 55/21, annex 9 and NAV 56/6 to the Technical Working Group for finalization of:

- .1 a draft MSC circular on Guidance on procedures for updating shipborne navigation and communication equipment; and
- .2 a draft SN circular on Maintenance of Electronic Chart Display and Information System (ECDIS) software,

with a view to approval by MSC 88.

Report of the Technical Working Group

6.8 Having received and considered the Technical Working Group's report (NAV 56/WP.4), the Sub-Committee (with reference to paragraphs 4.1 to 4.13 and annexes 3 and 4), took action as summarized hereunder.

6.9 The Sub-Committee endorsed:

- .1 SN.1/Circ.266/Rev.1 on maintenance of electronic chart display and information system (ECDIS) software (annex [...]); and
- .2 the draft MSC circular on Guidance on procedures for updating shipborne navigation and communication equipment (annex [...]),

with a view to approval by MSC 88.

6.10 The Sub-Committee authorized the Secretariat to issue a future revision of SN.1/Circ.266 upon receipt from IHO of updated information relevant to paragraph 6 and the footnotes, informing the Sub-Committee of the action taken, and invited the Committee to endorse this action.

6.11 The Sub-Committee instructed the Secretariat, with regard to the draft MSC circular on Guidance on procedures for updating shipborne navigation and communication equipment, to include the proposed footnotes in SOLAS chapter IV, regulation 15.5 and chapter V, regulation 16 at the next publication of the SOLAS Consolidated edition.

7 ITU MATTERS, INCLUDING RADIOCOMMUNICATIONS ITU-R STUDY GROUP MATTERS

7.1 The Sub-Committee noted that MSC 87 had extended the target completion date of this agenda item to 2011.

7.2 The Sub-Committee recalled that NAV 55 had considered document NAV 55/8/5 (Secretariat) containing the liaison statement from WP 5B to IALA, IMO, CIRM and IEC TC 80, concerning a revision of Recommendation ITU-R M.1371-3.

7.3 The Sub-Committee recalled also that NAV 55 had considered document NAV 55/10/1 (IALA) proposing amendments to the technical clarification of ITU Recommendation ITU-R M.1371-1 and that NAV 55 had noted concerns expressed by several delegations with regard to the descriptions proposed. It was, at the time, also noted that there were differences in the terminology and philosophy used in ITU-R Recommendation 1371-3 and the COLREGs. IALA had been invited to take the comments made by the Sub-Committee into account when preparing their submission to ITU on this issue.

7.4 The Sub-Committee noted that IALA had sent a submission on this issue to ITU, Working Party 5B.

7.5 The Sub-Committee considered document NAV 56/7 (Secretariat) containing a resulting liaison statement from the meeting of ITU-R Working Party 5B, (23 November to 3 December 2009), to IMO (COMSAR and NAV) and IALA concerning draft revision of Recommendation ITU-R M.1371-3.

7.6 The observer from IALA fully supported the contents of document NAV 56/7 (Secretariat).

7.7 The Sub-Committee agreed to refer document NAV 56/7 to the Technical Working Group for detailed consideration and development of a liaison statement on this matter to ITU, proposing revised definitions of the Navigation Status parameter of AIS Messages 1, 2, and 3 and comments on other matters, as appropriate.

Other AIS issues

AIS Binary messages

7.8 The Sub-Committee recalled that NAV 55 had developed a draft SN circular on Guidance on the use of AIS Application-Specific Messages and instructed the Secretariat to consolidate further clarifications to be submitted by interested delegations after NAV 55 and to finalize the revised draft SN circular for the consideration of and approval by MSC 87.

7.9 The Sub-Committee noted that MSC 87 had considered a proposal by Australia (MSC 87/9/3) suggesting the addition of a new paragraph 5 to the cover note of the draft SN circular. Since ITU Recommendation ITU-R M.1371 provided the reference for technical characteristics of the AIS, it was necessary for clarifications to be published with regard to the technical elements of the ITU Recommendation. Hence, it would, in Australia's view, seem appropriate that the ITU should be invited to incorporate these messages, as deemed appropriate, within their technical standards; and to develop clarifying guidance on technical implementation, should the need arise.

7.10 The Sub-Committee observed further that MSC 87 had noted that there was, in general, no support for the Australian proposal to amend the draft circular and subsequently approved SN.1/Circ.289 on Guidance on the use of AIS Application-Specific Messages, revoking SN/Circ.236 as from 1 January 2013. However, the Secretariat was instructed to prepare the relevant liaison statement for forwarding to ITU.

7.11 The Sub-Committee agreed to refer this issue also to the Technical Working Group for developing the relevant liaison statement to ITU.

Satellite detection of AIS

7.12 The Sub-Committee recalled that NAV 55 had noted the Preliminary draft new report ITU-R M. [SAT-AIS] on Improved satellite detection of AIS and approved the draft liaison statement on this matter to ITU-R.

7.13 The Sub-Committee noted that the Preliminary draft new report ITU-R M. [SAT-AIS] on Improved satellite detection of AIS had been approved by Study Group 5 as Report ITU-R M.2169. This ITU-R Report had been developed giving a technical background for the utilization of channels 75 and 76 of RR Appendix 18 in order to improve the satellite detection of AIS messages.

7.14 The Sub-Committee noted also that ITU's Working Party 5B had noted the liaison statement, sent by NAV 55 on Satellite detection of AIS, at its meeting from 23 November to 4 December 2009. Working Party 5B, at its last session, noted that Recommendation ITU-R M.1371-3 had been revised in order to introduce a new Message 27 for AIS. This message had been designed for the purpose of AIS satellite detection.

Future spectrum requirements with respect to e-navigation and Spectrum requirements within future maritime systems

7.15 The Sub-Committee recalled that NAV 55, at the request of COMSAR 13, had agreed that:

- .1 e-navigation would require a stable broadband VHF, HF and satellite data communications system;
- .2 maritime frequency spectrum should not be given up;
- .3 e-navigation would probably require additional frequency allocation which would be communicated to COMSAR in due course for onward transmission to ITU; and
- .4 ITU should be informed accordingly.

7.16 The Sub-Committee noted that COMSAR 14 had taken the advice of NAV 55 into account and had included in the draft IMO position on WRC-12 that "Initial consideration by IMO technical bodies have identified that e-navigation could not be deployed without

additional frequency allocations for these advanced maritime systems. Based on respective future studies both in IMO and ITU, spectrum requirements will be refined and validated."

7.17 The Sub-Committee noted further that after COMSAR 14 the draft IMO position for WRC-12 had been submitted to ITU Working Party 5B and Working Party 5B had taken the information into account at its last meeting (10 to 21 May 2010). Working Party 5B had also considered information provided by IALA on this matter and sent a liaison statement to IMO and IALA advising on the status of studies in ITU-R. Working Party 5B had informed IMO and IALA that e-navigation was one of several essential topics, which were initially addressed under WRC-12 Agenda item 1.10, but had proved to be too complex to reach a stage which could result in action by WRC-12. This meant that ITU-R would not further study this matter in preparation for WRC-12. The Joint IMO/ITU Experts Group, scheduled to meet from 14 to 16 September 2010, was instructed to further develop the draft IMO Position for WRC-12.

Report of the Technical Working Group

7.18 Having received and considered the Technical Working Group's report (NAV 56/WP.4), the Sub-Committee (with reference to paragraphs 5.1 to 5.14 and annexes 5 and 6) took action as summarized hereunder.

7.19 The Sub-Committee invited interested parties to make proposals for the future use of 3 of the 13 Navigation Status parameters which were available for future definition, as defined in Recommendation ITU-R M.1371-4.

7.20 The Sub-Committee approved the draft liaison statements to ITU-R WP 5B on:

- .1 the future revision of Recommendation M.1371-4 (annex [...]); and
- .2 the use of AIS application-specific messages (annex [...]),

and instructed the Secretariat to send it to ITU and invited the Committee to endorse this action.

8 DEVELOPMENT OF AN E-NAVIGATION STRATEGY IMPLEMENTATION PLAN

8.1 The Sub-Committee recalled that MSC 86 had instructed NAV 55 to:

- .1 consider future spectrum requirement with respect to e-navigation and advise COMSAR 14 accordingly; and
- .2 taking into account the user needs and current work on e-navigation, provide advice on the correct generic term to replace the terms "Decca" and "Loran" to STW 41.

8.2 The Sub-Committee recalled also that NAV 55 had established a Working Group to progress the issue and a Correspondence Group to work intersessionally and report to COMSAR 14 and NAV 56.

8.3 The Sub-Committee recalled further that NAV 55 had considered the report of the Working Group (NAV 55/WP.5) and:

- .1 noted the preliminary detailed shipboard user needs;
- .2 agreed to establish a correspondence group to further progress the work intersessionally to:
 - .1 review the preliminary detailed shipboard user needs, as developed by NAV 55, and update them as appropriate, and to consider priorities;
 - .2 develop detailed shore-based user needs, taking into account input provided by IALA, IHO and other relevant organizations and to consider priorities; and
 - .3 identify functions and services to support the shipboard and shore-based user needs in a harmonized and holistic manner; and
- .3 agreed that it would be necessary to verify and update the user needs, as and when necessary during the implementation process of the Organization's e-navigation strategy.

8.4 The Sub-Committee noted that COMSAR 14 had endorsed the views of the e-navigation working group that:

- .1 the conceptual e-navigation architecture as depicted in Figure 2 of document COMSAR 14/12 was a good basis for further development and simplification by the Correspondence Group;
- .2 figure 1 of document COMSAR 14/12 relating to the structure of the process for the development of the e-navigation concept should be further developed by the Correspondence Group;
- .3 the criteria for the selection of hardware and the development of the corresponding software should be further developed by the Correspondence Group with input from other organizations involved;
- .4 tables identifying current related communication equipment, performance standards including test standards and possible future communication equipment systems, respectively had been developed, which should be further developed by the Correspondence Group;
- .5 the satellite detection of ships' automatic identification systems could become part of the e-navigation concept; however, there were numerous issues which still had to be studied and discussed, including the protection of the frequencies reserved for AIS, which was a matter of concern;
- .6 the Committee had not taken any decision as yet on the issue of satellite detection of ships' automatic identification systems, pending the outcome of relevant studies under the framework of ITU;
- .7 the principles relating to bridge design, design and arrangement of navigational systems and equipment and bridge procedures in SOLAS regulation V/15 would be useful in identifying navigational system functions;
- .8 the World-Wide Radionavigation System was a central part of the e-navigation system, as it provided position and timing information for the whole system;

- .9 the issues of a terrestrial electronic position fixing system as a back-up system and user needs for security required further consideration by the Correspondence Group with input from other organizations involved;
- .10 the Correspondence Group should further consider the issue of common data structure for information exchange and requested IALA and IHO to provide the relevant input;
- .11 specific criteria for reliability, in support of the user needs stated in the e-navigation strategy, should be addressed within the gap analysis;
- .12 preliminary user needs analysis with respect to SAR should be further developed by the Correspondence Group as well as other relevant fora; and
- .13 the development of e-navigation and the scoping exercise to establish the need for a review of the elements and procedures of the GMDSS should be harmonized and there should also be an identification of user needs for GMDSS. In addition, further consideration should be given as to which basic communication capabilities should be a part of the developing e-navigation concept.

8.5 The Sub-Committee noted further that COMSAR 14 had, in particular:

- .1 endorsed the proposed methodology for carrying out the initial gap analysis;
- .2 noted the proposed methodologies for cost-benefit analysis and risk analysis; and
- .3 supported the proposal by Ukraine (COMSAR 14/7) identifying user needs and being an example of the benefits that could be obtained by integrating VHF DSC operation with the AIS-ECDIS; noting that this proposal was fully compatible with the e-navigation development strategic direction which envisaged further development of means of radiocommunications and navigation and the implementation of modern digital information technologies in navigation.

8.6 The Sub-Committee noted also that MSC 87 had noted the progress made to date.

8.7 The Sub-Committee also recalled the Secretary-General's opening remarks on the importance of staying focused on the task in hand and making progress in the further development of an e-navigation strategy implementation plan.

8.8 The Sub-Committee considered document NAV 56/8 (Norway) providing a comprehensive report of the work done by the Correspondence Group.

8.9 A number of delegations supported the work of the Correspondence Group. Some delegations voiced concern about the concept of Vessel Traffic Management (VTM).

8.10 The observer from the European Commission stated that, whilst IMO was developing e-navigation, the European Commission was simultaneously developing e-Maritime. ON the question whether e-navigation and e-Maritime were the same and whether there was any conflict, the simple answer was "no". In essence, IMO's e-navigation focused primarily on the shipborne navigation and on the development of electronic technology, processes and services to get a ship quickly and safely from berth to berth. Europe's e-Maritime focused primarily on the shore-based facilitation and on the development of electronic technology, processes and services to facilitate the flow of goods over sea – and consequently the ships that carry these goods – to, from and around Europe. The European Commission intended to develop applications for administrations, ship operations, ports/terminals, transport logistics and improving life at sea and promoting seafaring. Of course, both developments partly made use of the same electronic technology, processes and service, and in the e-Maritime concept development, the European Commission wanted to make use of those being developed by IMO for e-navigation, wherever possible. The European Commission intended to lay out a framework for e-Maritime in 2011 for adoption by the European Union (EU) Member States in 2013 with the intention to have the supporting electronic technology processes and services in operation around Europe in 2018.

There was already a vast amount of Research & Development studies carried out within Europe on this issue, sponsored by the EU, in the MARNIS project. This had already been made available for the development of e-navigation within IMO where relevant and appropriate, mostly through the gained expertise and insights by the involved experts of the

European Member States who had also participated in the development of e-navigation in IMO and would continue to do so.

8.11 The delegation of the Netherlands informed the Sub-Committee that a VTM concept was under development by IALA and further suggested that VTM should be put on the biennial agenda of the Sub-Committee through the Maritime Safety Committee.

8.12 The delegation of the Russian Federation suggested that automated voyage planning should be highlighted in the development of e-navigation and that organizational standards for route planning should also be developed.

8.13 The Chairman, in his summing up, advised the Working Group to be established not to address the VTM concept for the time being and concentrate instead of user needs both afloat and ashore.

8.14 The Sub-Committee agreed that document NAV 56/8 should be used as the basic document for further work during the current session and that it would be advisable to instruct the anticipated e-navigation Working Group to be established under this item to undertake a thorough review of the document before the Sub-Committee takes the requested relevant actions detailed in paragraphs 71.1 to 71.10.

8.15 The Sub-Committee considered documents NAV 56/8/1, NAV 56/8/2, NAV 56/8/3, NAV 56/8/4 and NAV 56/8/6 (IALA) providing the result of the work done to identify the user needs for e-navigation, details of the IALA maritime radio Communication Plan to assist in the selection of radio communication systems required to support e-navigation, details of the IALA World-Wide Radio Navigation Plan, details of the e-navigation architecture from a shore-based perspective as recommended for the IALA Members and guidance on the standards for the exchange and presentation of aids to navigation information as a component of a proposed internationally agreed common data structure.

8.16 The delegations of the United Kingdom, Bahamas and the Marshall Islands thanked IALA for document NAV 56/8/3, outlining that one of the key elements of e-navigation was a robust electronic position, navigation and timing system with redundancy in order to provide a viable terrestrial back-up to GNSS.

8.17 The delegation of Australia, with reference to document NAV 56/8/2, invited the Sub-Committee to support the continued use of existing Maritime channels for general analogue and digital communication; more specifically the spectrum around 500 kHz and Appendix 17 channels.

8.18 The observer from ICS expressed concern about the need for additional AIS channels on the grounds that a compelling need for them had not been demonstrated.

8.19 The Sub-Committee noted that all these inputs by IALA had already been taken into account by the Correspondence Group.

8.20 The Sub-Committee noted with interest the information provided by IHO (NAV 56/8/7), in line with the Sub-Committee's request to IHO, at its fifty-fourth session, on the progress made in worldwide ENC coverage based on available data as of 16 April 2010 and expressed its appreciation for keeping the Members updated.

8.21 The delegation of South Africa, with reference to paragraph 3 of document NAV 56/8/7, requested IHO to indicate where the gaps would be in 2010. The observer from IHO clarified that the updated information could be obtained from the IHO website.

8.22 The Sub-Committee considered document NAV 56/8/8 (Singapore) proposing the use of multi-hop wireless networks to provide communication services for safety, e-navigation, Internet Access, and ship-to-ship communications.

8.23 The Sub-Committee supported the concept of the multi-hop network and agreed that it should be considered for inclusion as a component of e-navigation.

8.24 The Sub-Committee agreed to refer document NAV 56/8/8 to the e-navigation Working Group for consideration and advice.

8.25 The Sub-Committee considered document NAV 56/8/9 (Japan) explaining the necessity for the establishment of a methodology to assess usability of navigational equipment and also summarizing the result of Japan's study on the methodologies used in the other sectors. Japan was of the opinion that the Organization should develop a methodology in association with the development of an e-navigation strategy implementation plan.

8.26 The Sub-Committee agreed that it was necessary to establish a methodology to assess usability of navigational equipment. The delegation of Germany was of the view that other existing instruments, such as MSC/Circ.982, could also be used for the same purpose.

8.27 The Sub-Committee agreed to refer document NAV 56/8/9 to the e-navigation Working Group for consideration and advice.

8.28 The Sub-Committee noted the information provided by IALA (NAV 56/INF.3) on Frequently Asked Questions as it appeared on the IALA website.

8.29 The Sub-Committee noted the information provided by Canada (NAV 56/INF.6) on the findings of a comprehensive e-navigation user needs survey conducted in Canada. Shipborne and shore-based user needs were assessed throughout Canada from May to October 2009 using the questionnaire developed jointly by Germany and Canada for the worldwide survey. Canada's survey reinforced the findings of other user needs surveys; however, evolving user needs and preferences would still need to be taken into account as e-navigation progresses.

8.30 The Sub-Committee noted the information provided by Singapore (NAV 56/INF.7) on research results on the characteristics of radio signal propagation and the performance of broadband mesh data transmission in the maritime environment.

8.31 The Sub-Committee noted the information provided by the Nautical Institute (NAV 56/INF.7) on the need for the creation of a common data infrastructure or framework for e-navigation, which should be a collaborative effort across the various relevant international organizations involved to ensure the e-navigation demand for data access and information services are harmonized and interoperable.

8.32 The Sub-Committee noted the information provided by the Republic of Korea (NAV 56/INF.10) on the considerations for the gap analysis in view of mariner's working procedure recommended by ICS, which included technology, system automation and updates of relevant regulations.

8.33 The Sub-Committee noted the information provided by Japan (NAV 56/INF.13) for the development of preliminary draft guidelines for usability evaluation of navigational equipment, identifying five points to be addressed in usability evaluation.

8.34 The Sub-Committee noted the information provided by Japan (NAV 56/INF.14) identifying eight services and functions of e-navigation that Japan considered would enhance safety at sea, some of which had been included in the report of the Correspondence Group.

Establishing the e-navigation Working Group

8.35 After preliminary discussion, as reported in paragraphs 8.1 to 8.18 above, the Sub-Committee re-established the e-navigation working Group and instructed it to consider the relevant documents submitted under agenda item 8, in particular, NAV 56/8 (Norway), NAV 56/8/8 (Singapore) and NAV 56/8/9 (Japan) including the information provided in documents NAV 56/INF.6 (Canada), NAV 56/INF.7 (Singapore), NAV 56/INF.9 (Nautical Institute), NAV 56/INF.10 (Republic of Korea), NAV 56/INF.13 and NAV 56/INF.14 (Japan), plus the outcome of NAV 55, COMSAR 14 and documents submitted by IALA in support of the Correspondence Group and taking into account any decisions of, and comments and proposals made in, Plenary, undertake the following tasks:

- .1 review the report of the Correspondence Group and provide comments and recommendations with respect to the actions requested in paragraphs 71.2 to 71.10 of document NAV 56/8;
- .2 review and finalize the user needs (NAV 56/8, annexes 2, 3, 4 and 5);
- .3 review and consolidate the process of completing initial gap analysis and provide comments and recommendations including methodology for addressing future user needs;
- .4 review and consolidate the process of completing the initial cost/benefit and risk analysis and provide comments and recommendations;
- .5 review and revise the terms of reference for a correspondence group to progress work intersessionally for reporting to STW 42, COMSAR 15 and NAV 57, based on the joint plan of work approved by MSC 86;
- .6 take into account the role of the human element guidance as updated at MSC 75 (MSC 75/24, paragraph 15.7) including the Human Element Analysing Process (HEAP) given in MSC/Circ.878-MEPC/Circ.346 in all aspects of the items considered; and

- .7 submit a report to Plenary on Thursday, 29 July 2010 for consideration at Plenary.

Report of the e-Navigation Working Group

8.36 Having received and considered the e-navigation Working Group's report (NAV 56/WP.5), the Sub-Committee (with reference to sections 3 to 9, and annexes 1 to 7) took action as summarized hereunder.

[Actions related to the report of the correspondence group]

8.37 The Sub-Committee endorsed the recommendations of COMSAR 14 concerning the various components of the e-navigation architecture with the understanding that these might be reviewed as the work on e-navigation progresses.

8.38 The Sub-Committee endorsed the concept of the functional architecture, as outlined in the report of the correspondence group and recommended by COMSAR 14, taking into account that the outcome of various analyses (gap, cost and risk) would lead to the identification of a proposed technical architecture for e-navigation.

8.39 The Sub-Committee endorsed the initial gap analysis prepared by the correspondence group.

8.40 The Sub-Committee endorsed the initial cost benefit and risk analyses.

8.41 The Sub-Committee endorsed that the identified user needs of e-navigation should be taken into account with regard to the scoping exercise concerning an eventual review of GMDSS.

8.42 The Sub-Committee noted that the common maritime information and data structure, which could contain IALA's UMDM, IHO's UHDM, etc., would require some form of overarching coordination to ensure the ongoing management and maintenance of the structure.

8.43 The Sub-Committee supported the identification of areas of services of e-navigation.

User needs

8.44 The Sub-Committee agreed that:

- .1 the information relating to e-navigation on the IMO website should be updated;
- .2 users, in particular seafarers, should continue to be involved during the development of an e-navigation strategy implementation plan;
- .3 the re-established correspondence group should develop an information document and presentation material to assist any Member States and international organizations that might want to promote e-navigation;
- .4 Member States and international organizations holding such promotion events should be encouraged to provide feedback reports to the Sub-Committee; and
- .5 "Frequently Asked Questions" relating to e-navigation should be posted on the IMO website and updated on a regular basis.

8.45 The Sub-Committee noted the discussions of the Group relating to the development of the methodology to assess the usability of navigational equipment.

8.46 The Sub-Committee approved the user needs prepared by the Group, as set out in annexes 2 to 5 to document NAV 56/WP.5.

Initial gap analysis

8.47 The Sub-Committee invited IALA and IHO to finalize the gap analysis on shore-side aspects and report to COMSAR 15 and NAV 57.

8.48 The Sub-Committee noted the discussions of the Group relating to initial gap analysis.

500 kHz band to support e-navigation

8.49 The Sub-Committee invited the Joint IMO/ITU Expert Group on Maritime Radiocommunication Matters, at its next meeting from 14 to 16 September 2010, to consider further use of the 500 kHz band to support e-navigation.

Cost benefit and risk analyses

8.50 The Sub-Committee noted the discussions of the Group relating to cost benefit and risk analyses.

Re-establishment of the correspondence group

8.51 The Sub-Committee re-established the correspondence group under the coordination of Norway¹ and instructed it to take into account document MSC 86/23/4 (Secretariat), relating to the joint work plan for COMSAR, NAV and STW Sub-Committees for the period 2009-2012, the comments and general views expressed at NAV 56 and, decisions taken by NAV 52 including the guidance in MSC/Circ.1091 on Issues to be considered when introducing new technology on board ship and MSC/Circ.878-MEPC/Circ.346 on Human Element Analysing Process (HEAP); the Correspondence Group on e-navigation should undertake the following tasks:

- .1 consider documents NAV 56/8, MSC 85/26 (annex 20, paragraph 9.7.2 and annex 21, paragraph 5) and NAV 56/WP.5, annex 1, and finalize the system architecture;
- .2 consider documents NAV 53/13 (annex 3), NAV 56/INF.10 (Republic of Korea) and MSC 85/26 (annex 20, paragraph 9.7.3 and annex 21, paragraph 6), and progress the initial gap analyses focusing on technical, regulatory, operational and training aspects;
- .3 submit a report to STW 42 (24 to 28 January 2011) raising specific questions, if required, that should be addressed by STW;

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- .4 submit a report to COMSAR 15 (7 to 11 March 2011) outlining an overall conceptual, functional and technical architecture and the progress made in the initial gap analyses focusing on communication and SAR issues;
 - .5 submit a consolidated progress report to NAV 57 (6 to 10 June 2011) outlining the further analyses for navigation and related shore-based services issues, the completed and ongoing work including a provisional outline/draft of the Strategy Implementation Plan and progress on the cost benefit and risk analyses;
 - .6 develop version controlled information documents and presentation material on the IMO's e-navigation concept and e-navigation implementation strategy plan for use by Member States and international organizations to hold workshops to promote e-navigation; and
 - .7 based on the requirements stipulated in the e-navigation strategy section 8 (MSC 85/26, annex 20) to identify and describe an enabling data framework to support user needs and ensure maximum interoperability.

8.52 Bearing in mind that the correspondence group would not be able to meet the bulky document deadline to report the outcome of COMSAR 15 in its report to NAV 57, the Sub-Committee agreed to extend the deadline for submission of its report to 1 April 2011, subject to endorsement by the Committee.]

[8.53 In summing up following the report of the e-navigation working group, the Chairman thanked Mr. John Erik Hagen and all members of the working group for their efforts. However the Chairman expressed concern that the overall e-navigation effort was becoming over burdened by having to address extraneous information, documents and proposals that were not relevant to their Terms of Reference or to the e-navigation structure outlined in document MSC 86/23/4. The Chairman made clear that the Sub-Committee had to remain focused on delivering an e-navigation strategy implementation plan as was required by the Committee.]

9 GUIDELINES ON THE LAYOUT AND ERGONOMIC DESIGN OF SAFETY CENTRES ON PASSENGER SHIPS

9.1 The Sub-Committee recalled that NAV 55 had considered document NAV 55/12 (CLIA) providing information regarding aspects related to the construction and layout of

Safety Centres and making reference to MSC/Circ.982 on Guidelines on Ergonomic Criteria for Bridge Equipment and Layout and SN.1/Circ.265 on Guidelines on the Application of SOLAS regulation V/15 to INS, IBS and Bridge Design. CLIA was of the view that the concepts and guidance outlined in the aforementioned circulars provided excellent guidance, in general and, in particular, as applied in the context of the Safety Centre, and might be applicable to its relevant equipment, function, layout and procedures.

9.2 The Sub-Committee further recalled that NAV 55 had agreed that since no other substantial documents had been submitted on this issue to that session and the input from the FP Sub-Committee would only be available after FP 54 (April 2010), the matter should be postponed for further consideration at NAV 56, inviting Members to submit suitable proposals. Accordingly, the Committee was invited to extend the target completion date of this agenda item to 2010, which it endorsed.

9.3 The Sub-Committee noted that FP 54, recognizing the necessity to make progress on this issue, had instructed the working group on the Explanatory Notes for the Application of the Safe Return to Ports Requirements to finalize the text of the draft Clarifications of SOLAS chapter II-2 requirements regarding interrelation between central control stations and safety centres and the associated MSC circular, based on annexes 4 and 5 of the report of the correspondence group (FP 54/8).

9.4 The Sub-Committee further noted that FP 54 had agreed to the draft Interim Clarifications of SOLAS chapter II-2 requirements regarding interrelation between central control stations and an associated draft MSC circular, for submission to MSC 87 for approval; and requested the Secretariat to inform the STW and NAV Sub-Committees on the outcome of this item for consideration and action, as appropriate.

9.5 The Sub-Committee also noted that MSC 87 had approved the corresponding MSC.1/Circ.1368 to provide additional guidance for the uniform implementation of SOLAS regulation II-2/23, adopted by resolution MSC.216(82), due to enter into force on 1 July 2010.

9.6 The Sub-Committee noted that since MSC 87 had already approved MSC.1/Circ.1368, there was no further action to be taken by the Sub-Committee. Accordingly, the Committee was invited to delete this item from its biennial agenda.

10 REVIEW OF VAGUE EXPRESSIONS IN SOLAS REGULATION V/22

10.1 The Sub-Committee recalled that MSC 82 had considered a proposal by Germany (MSC 82/21/11) to develop, in view of some cases of stowage of containers above the line of visibility, a clarification of SOLAS regulation V/22 (Navigation bridge visibility) or revision of the regulation, to ensure safe navigation and to avoid ship detentions, and agreed to include, in the NAV Sub-Committee's work programme, a high-priority item on "Review of vague expressions in SOLAS regulation V/22". In this respect, MSC 82 had noted a view that rather than developing amendments to the SOLAS Convention, guidance on the implementation of regulation V/22 might be prepared and agreed that it should be left to the Sub-Committee to decide on the course of action to be taken when addressing the issue.

10.2 The Sub-Committee also recalled that NAV 54 had considered document MSC 82/21/11 (Germany), outlining the experience made with stowage of containers above the line of visibility which might present a danger to collision avoidance and the safe operation of a ship, together with document NAV 54/17 (Denmark and Singapore), proposing an amendment of SOLAS regulation V/22, which enabled ships to verify compliance with SOLAS regulation V/22, when loading deck cargo. There was a brief general discussion on the issue. Delegations who spoke were, in general, supportive of the idea of an amendment to SOLAS regulation V/22. However, concerns were raised as to the scope of application to different types of ships, applicability to existing ships, the potential need for new equipment, and the need for flexibility in the application of the proposed draft amendment. The Sub-Committee agreed that it was premature to take any decision at that time and that more detailed consideration was necessary prior to finalization. Member Governments were invited to submit suitable proposals, taking into account the above concerns raised in Plenary, for further consideration at NAV 55.

10.3 The Sub-Committee further recalled that NAV 55 had considered document NAV 55/13/1 (Norway), proposing a series of amendments to SOLAS regulation V/22, namely subparagraphs 22.1.2, 22.1.7, 22.1.8 and 22.1.9.4 in order to clarify the intent of the regulation and ensure uniform understanding of the requirements. Some delegations spoke on the issue, voicing concerns with respect to the proposed amendments related to SOLAS regulation V/22.1.2 – Blind Sectors with respect to the "designated" conning position; SOLAS regulation V/22.1.7 – Height of lower edge of bridge front windows with respect to minimum lower height; meaning of the term "clear view"; conflicted with the calculation of angles of visibility under the dynamic conditions of pitch and roll, and applicability to existing ships.

10.4 The Sub-Committee recalled further that NAV 55 had also considered document NAV 55/13/2 (Denmark) proposing an amendment to SOLAS regulation V/22.5 enabling ships to verify compliance with SOLAS regulation V/22 when loading deck cargo. The Sub-Committee was of the view that the Danish proposal would apply more to containership visibility and that it was premature to take any decision and agreed to invite the Committee to extend the target completion date of this agenda item to 2010, since more time was needed to take a technically sound decision on the matter. Members were invited to submit consolidated proposals for consideration at NAV 56.

Proposed amendments to SOLAS regulation V/22

10.5 The Sub-Committee considered document NAV 56/10 (Norway), proposing the following amendments to SOLAS regulation V/22, in order to clarify the intent of the regulation and to ensure uniform understanding of the requirements:

- .1 SOLAS regulation V/22.1.2 relating to blind sectors;
- .2 SOLAS regulation V/22.1.7 relating to height of lower edge of bridge front windows;
- .3 SOLAS regulation V/22.1.8 relating to height of upper edge of bridge front windows and height of helicopter deck; and
- .4 SOLAS regulation V/22.1.9.4 relating to clear view through the bridge front windows.

10.6 The Sub-Committee considered document NAV 56/10/2 (Denmark and the Marshall Islands) proposing amendments to SOLAS regulation V/22 suggesting the addition of a new paragraph 5 to enable ships to verify compliance with SOLAS regulation V/22 when loading deck cargo.

Unified Interpretation of SOLAS regulation V/22

10.7 The Sub-Committee considered document NAV 56/10/1 (Republic of Korea) proposing a draft unified interpretation regarding the application of visibility requirements of SOLAS regulation V/22 (regulations V/22.1.1, 22.1.2, 22.1.3, 22.1.17, 22.1.9.2 and 22.1.9.4) and the development of a corresponding draft MSC circular on the Unified interpretation.

10.8 A number of delegations and observers spoke on the issue. All were in agreement that there was a need to clarify the vague expressions in SOLAS regulation V/22. Some were of the view that the basic threshold for compliance should be ships greater than 300 gross tonnage, whilst others were of the view that the proposed amendments should be performance based and not too prescriptive.

10.9 The delegation of Germany had a particular concern with respect to the height of stacked cargo obscuring the line of sight. Germany was of the view that this high stacking of cargo and the resulting erratic blind sectors had become a regular feature instead of exceptional occurrences.

10.10 The observer from IACS, whilst welcoming the proposed amendments to SOLAS regulation V/22, urged the Sub-Committee to proceed on this issue with some caution. The IACS observer was of the view that instead of developing Unified Interpretations on the issue, it was preferable to develop clear and unambiguous amendments to SOLAS regulation V/22.

10.11 The Sub-Committee, recognizing that there were quite a number of amendments involved, agreed that it would be appropriate to establish a Drafting Group to collate all the proposed amendments into one single document to facilitate consideration by Plenary.

10.12 After preliminary discussion, as reported in paragraphs 10.5 to 10.11 above, the Sub-Committee established a Drafting Group on Review of vague expressions in SOLAS regulation V/22 and instructed it, in accordance with its decision and comments and proposals made in Plenary, to undertake the following tasks:

- .1 consider documents NAV 56/10 (Norway) and NAV 56/10/2 (Denmark and the Marshall Islands) [including NAV 56/10/1 (Republic of Korea)] submitted under agenda item 10 regarding the proposed amendments to SOLAS regulation V/22, and prepare a draft text of the proposed amendments to SOLAS regulation V/22 [or a draft MSC circular on Unified interpretation regarding the application of visibility requirements of SOLAS regulation V/22], as appropriate, for consideration and approval by Plenary; and
- .2 submit a report to Plenary on Thursday, 29 July 2010 for consideration at Plenary.

Report of the Drafting Group

10.13 Having received and considered the Drafting Group's report (NAV 56/WP.6 and WP.6/Corr.1 (English only)), the Sub-Committee (with reference to paragraphs 3.1 to 3.13 and annex) took action as summarized hereunder.

10.14 The Sub-Committee, after an extensive discussion with regard to proposed amendments to the chapeau of paragraph 1 of regulation V/22, agreed a revised date for application of the proposed amendments to be adopted.

10.15 During the discussion with regard to proposed amendments to paragraph 1.9.4 of regulation V/22, a number of delegations expressed concern with using a reference to paragraph 1.3 of this regulation as a means to specify a requirement for maintaining clear and clean windows through a field of vision of 225 degrees on the bridge, as this would introduce significant structural changes to the design of windows on the bridge, and there was also no clear indication that the means to provide a clear view would be mechanical.

10.16 A number of delegations, in order to clarify the proposed amendments, suggested further amendments to the draft text thereby creating other vague expressions, thus contradicting the intended purpose of amending the regulation which was to eliminate existing vague expressions.

10.17 The Sub-Committee, after a lengthy debate and taking into account the diverse views expressed on the interpretation of the proposed amendments, agreed that any substantive changes to this regulation should be supported by a proper analysis of all related issues including a cost-benefit analysis, in order to remove vague expressions and ensure effective application of the requirements.

10.18 The Sub-Committee considered the draft text of the proposed new paragraph 1.10 (NAV 56/WP.6/Corr.1) related to a definition of "conning position", and in this context agreed to delete the proposed reference to radar and other means as specified in SOLAS regulation V/19.2.3.2 in the proposed amendment, as this would re-introduce the proposal of a dedicated conning position, as the definition of the conning position within the context of new paragraph 1.10 should only be to provide a design parameter from where the field of vision is provided in compliance with paragraph 1.3.

10.19 A number of delegations also expressed concern that the definition of the conning position should be clarified to clearly indicate if the reference was to a single position or a number of positions on the bridge. Therefore, the Sub-Committee agreed that several issues remained requiring further clarification, before the proposed amendments could be finalized.

10.20 Taking into account the above, the Sub-Committee agreed that it was premature to finalize the amendments to SOLAS regulation V/22 at its present session for consideration and approval by the Committee, and that the proposed amendments needed to be considered further in order to clarify outstanding issues prior to finalization of the amendments. In response to a request from the delegation of Denmark to adopt their proposed amendment for a means to verify compliance, the Sub-Committee agreed that this proposed text should not be adopted in isolation.

10.21 Accordingly, the Sub-Committee agreed to the establishment of a correspondence group under the coordination of [the United States*] and approved the following terms of reference.

10.22 The Correspondence Group should consider documents NAV 56/10 (Norway), NAV 56/10/1 (Republic of Korea) and NAV 56/10/2 (Denmark and the Marshall Islands) outlining the proposed amendments to the existing SOLAS regulation V/22 on navigation bridge visibility as well as the report of the Drafting Group established at NAV 56 (NAV 56/WP.6 and Corr.1 (English only), including comments made in Plenary and any other relevant information, finalize a draft text and submit a report for consideration and review by the Sub-Committee at its fifty-seventh session (NAV 57).

10.23 The Committee was requested to extend the target completion year of the biennial agenda "Review of vague expressions in SOLAS regulation V/22" to 2011.

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11 NEW SYMBOLS FOR AIS AIDS TO NAVIGATION

11.1 The Sub-Committee recalled that MSC 86, following consideration of document MSC 86/23/7 (Japan), proposing to develop new symbols for AIS aids to navigation and taking into account the comments provided in document MSC 86/23/18 (CIRM), had agreed to include, in the work programme of the NAV Sub-Committee, a high-priority item on "New symbols for AIS aids to navigation", with a target completion date of 2013, and instructed NAV 55 to include the item in the provisional agenda for NAV 56.

11.2 The Sub-Committee also recalled that NAV 55 had noted with interest the information provided by Denmark (NAV 55/INF.7) regarding a Danish study on experiences gathered from AIS AtoN trials. The intention was to summarize the most important experiences gained and issues raised, also with reference to a proposed new work programme item (MSC 86/23/7) for the Sub-Committee to develop new symbols for AIS AtoN. Tools such as virtual or synthetic AIS AtoN, the symbology in SN/Circ.243, a diamond with crosshair symbol, were evaluated together with AIS safety-related text message services. The observer from IALA had informed the Sub-Committee that IALA was organizing a workshop on the matter in January 2010 and its outcome would be reported to NAV 56.

11.3 The Sub-Committee considered document NAV 56/11 (Japan) providing examples of draft new symbols for AIS-AtoN, whose design was based on the present symbols for AIS-AtoN defined in SN/Circ.243. The new symbols put top marks defined in the IALA Maritime Buoyage System on the present symbols.

11.4 The Sub-Committee also considered document NAV 56/11/1 (IHO) stating that it was not necessarily opposed to the use of Virtual AtoN, whether on a temporary or permanent basis, but believed that there needed to be a wider discussion and agreement on the matter.

11.5 The Sub-Committee further considered document NAV 56/11/2 (United Kingdom) providing information on the application and display of AIS aids to navigation. The present standard for representation of AIS AtoNs was therefore a diamond with a cross at the actual position. A "V" is superimposed for virtual AtoNs.

11.6 The Sub-Committee took into consideration document NAV 56/11/3 (Denmark) providing comments on the new symbols for AIS Aids to Navigation submitted by Japan.

Denmark was of the view that there was a need for clarification on the use of AIS AtoN symbols. While an amendment of SN/Circ.243 based on the proposal from Japan would be useful for improving the graphical display of current AIS AtoN, a number of related issues needed still to be addressed.

11.7 A number of delegations spoke on the issue and expressed their appreciation of the initiative undertaken by Japan in developing examples of draft new symbols for AIS AtoN. However, there was concern that the broader issue of AIS AtoN had not been discussed in detail at IMO. It was therefore necessary to have a wider discussion of the issue relating to policy matters, limitations on use, training of seafarers and limitations of display including information overload.

11.8 The delegation of South Africa was of the view that the scope of the issue was broader than the issue of symbology. There was a need for a joint submission to the Committee for a new biennial agenda item to be put on the Sub-Committee's agenda to address the various concerns related to this issue.

11.9 Accordingly, the Sub-Committee agreed that it was rather premature to establish a Correspondence Group on AIS AtoN symbology. It was first imperative to have a policy in place before any major work was undertaken on this issue.

11.10 The delegation of Japan thanked the Sub-Committee for its valuable comments and stated that Japan intended to submit a document to the Committee to facilitate the policy study.

IALA Recommendation on Virtual Aids to Navigation

11.11 The Sub-Committee noted with interest the information by IALA (NAV 56/INF.2) on the definition and the use of virtual aids to navigation as the result of a workshop organized by IALA in January 2010. The Recommendation (IALA Recommendation O-143) of this workshop offered national members of IALA and other authorities guidance on the use of virtual aids to navigation.

Use of Electronic Chart Systems (ECS) and class B AIS in Chinese domestic ships

11.12 The Sub-Committee noted with interest the information provided by China (NAV 56/INF.11) containing an update on a project to enhance the safety of navigation on the Chinese domestic ships and promote e-navigation in the Chinese waters, China initiated

promotion of the use of Electronic Chart Systems (ECS) and class B AIS in domestic ships. The project had completed its trial phase between 2007 and 2009, and would enter its implementation phase on 1 July 2010.

12 AMENDMENTS TO THE WORLD-WIDE RADIONAVIGATION SYSTEM

12.1 The Sub-Committee recalled that MSC 86, following consideration of document MSC 86/23/12 (Netherlands, Sweden, United Kingdom and United States), proposing to develop amendments to the World-wide Radionavigation system (WWRS) (resolution A.953(23)) to take account of developments in radionavigation services, had agreed to include, in the work programme of the NAV Sub-Committee, a high-priority item on "Amendments to the World-wide radionavigation system", with a target completion date of 2011, and instructed NAV 55 to include the item in the provisional agenda for NAV 56.

12.2 The Sub-Committee considered document NAV 56/12 (Netherlands, Sweden, United Kingdom and United States) proposing amendments to resolution A.953(23) in order that more Administrations might be encouraged to submit suitable radionavigation services to IMO as components of the World-wide Radionavigation System (WWRNS). Amendments had been proposed to the Appendix (operational requirements) of resolution A.953(23), as follows:

- .1 existing section 1.3 should be amended;
- .2 existing sections 2 and 3 should be merged/revised and re-numbered as a new section 3; and
- .3 existing section 4 should be amended and re-numbered as a new section 2.

12.3 There was general support for the proposed amendments to the Appendix (operational requirements) of resolution A.953(23) and the Sub-Committee agreed to incorporate the amendments into the draft revised text of resolution A.953(23), as given at annex, with a view to forwarding it to the Committee for approval.

Update on eLoran

12.4 The Sub-Committee noted with interest the information provided by the United Kingdom (NAV 56/INF.16) on an update on the status and development of eLoran, as a potential complementary system to GNSS.

12.5 The Sub-Committee further agreed to refer document NAV 56/INF.16 to the e-navigation Working Group for consideration in the context of a terrestrial complement to the existing Global Navigation Satellite System (GNSS).

12.6 The Committee was consequently invited to delete the item "Amendments to the world-wide radio navigation system" from the Sub-Committee's biennial agenda.

13 REVIEW OF THE PRINCIPLES FOR ESTABLISHING THE SAFE MANNING LEVEL OF SHIPS INCLUDING MANDATORY REQUIREMENTS FOR SAFE MANNING

13.1 The Sub-Committee recalled that, at STW 40, its relevant Working Group had noted that the draft revised text of resolution A.890(21), as amended, should also be reviewed by the NAV Sub-Committee from the operational aspect. Accordingly, STW 40 had invited the Committee to:

- .1 instruct NAV 55 to review, on a preliminary basis, the preliminary draft revised Assembly resolution on Principles of Safe Manning (resolution A.890(21), as amended); and
- .2 include the work programme item "Review of the principles for establishing the safe manning levels of ships including mandatory requirements for determining safe manning" on the work programme of the NAV Sub-Committee and on the provisional agenda for NAV 56,

which MSC 86 had done accordingly.

13.2 The Sub-Committee further recalled that NAV 55 had reviewed, on a preliminary basis, the preliminary draft revised Assembly resolution on Principles of Safe Manning (resolution A.890(21), as amended) and provided its comments to STW 41.

13.3 The Sub-Committee noted that STW 41 had endorsed the draft Assembly resolution on Principles of Minimum Safe Manning, with a view to approval by MSC 88 and submission to A 27 for adoption, subject to comments made by NAV 56. It had also endorsed the draft amendments to SOLAS regulation V/14 with a view to approval by MSC 88 and adoption by MSC 89, subject to comments made by NAV 56. STW 41 had further requested the NAV Sub-Committee to review the draft Assembly resolution on Principles of Minimum Safe Manning and the draft amended text of SOLAS regulation V/14 and forward its comments thereon, if any, to MSC 88 for appropriate action.

13.4 The Sub-Committee also noted that MSC 87 had instructed the Sub-Committee accordingly and to forward its comments thereon, if any, to MSC 88 for appropriate action.

13.5 The delegation of the Bahamas, supported by others, drew the attention of the Sub-Committee to the draft Assembly resolution on Principles of Minimum Safe Manning and the draft amended text of SOLAS regulation V/14 which had been discussed and finalized at STW 41, and they considered that it was not necessary to review them again.

13.6 The ITF observer, supported by IFSMA, was of the opinion that NAV 55 had considered this matter and forwarded the draft with amendments to annex 5 and with general text in the regulations that supported implementation and effective enforcement. Subsequently, amendments to annexes 2 and 5 had removed all wording that would ensure implementation or enforcement of the process to determine minimum manning and any new regulation that would allow it to be auditable and verifiable.

13.7 In this context, ITF was of the opinion that this revised regulation V/14 would do nothing to improve safety of navigation and reminded the Sub-Committee that in the Year of the Seafarer, it might lose an opportunity to improve seafarers' safety and called on it to again review the amended text in line with objectives in annex 1 of the draft text.

13.8 The majority of delegations were of the opinion that the draft Assembly resolution on Principles of Minimum Safe Manning and the draft amended text of SOLAS regulation V/14 had been agreed at STW 41 and in as much as no comments or submissions had been received thereon for the current session, there was no need to then review them.

13.9 Accordingly, the Sub-Committee agreed that it was not necessary to convene a drafting group and decided to forward the finalized draft Assembly resolution on Principles of

Minimum Safe Manning and the finalized draft amended text of SOLAS regulation V/14 to MSC 88 with a view to approval.

13.10 The Committee was invited to consequently delete the item "Review of the principles for establishing the safe manning level of ships including mandatory requirements for safe manning" from the Sub-Committee's biennial agenda.

14 AMENDMENTS TO THE 1966 LL CONVENTION AND THE 1988 LL PROTOCOL RELATED TO SEASONAL ZONE

14.1 The Sub-Committee recalled that MSC 86, following consideration of document MSC 86/23/3 (South Africa) in the context of the SLF Sub-Committee's work programme, had agreed to include in the work programme of the NAV Sub-Committee, a high-priority item on "Amendments to the 1966 LL Convention and the 1988 LL Protocol", with a target completion date of 2011, assigning the SLF Sub-Committee as coordinator, and instructed NAV 55 to include the item in the provisional agenda for NAV 56.

14.2 The Sub-Committee recalled also that, in considering document MSC 86/23/3 (South Africa), SLF 52 had noted that, while some delegations had expressed concerns regarding the safety risks incurred by reducing freeboards and, therefore, felt that further meteorological data (e.g., wave heights and swells) was needed before a final decision could be taken on this proposal, other delegations supported South Africa's proposal stating that sufficient data had been submitted against the criteria stipulated in the Load Lines Convention, and that, in other regions, the summer zone went as far South as 47° S (660 nautical miles further into the Southern Ocean), as in the case of New Zealand.

14.3 The Sub-Committee recalled further that in response to the above comments, the delegation of South Africa pointed out that there was no appreciable difference in sea and weather conditions between the current winter seasonal zone and the proposed new zone contained in the annex to document MSC 86/23/3. Following discussion, SLF 52, having noted South Africa's intention to submit further relevant information on the matter, invited Member Governments and international organizations to submit relevant comments and data to SLF 53, with a view to finalizing the item at the next session. In this context, SLF 52 also invited Member Governments and international organizations, if they so wished, to contact South Africa for exchanging data and views.

14.4 The Sub-Committee noted that no document has been submitted to the current session. However, information on the status of the current seasonal zone, including historical data for the period 1930 to 2006/7 regarding wind velocities/direction, wind data areas including routeing measures, proposed seasonal zone and wave heights and direction could be made available for the benefit of the Ships' Routeing Working Group.

14.5 The delegation of the Cook Islands informed the Sub-Committee that it had initially expressed concern for extending the Summer Load Line 50 miles southward off Cape Agulhas because, in their view, to reduce freeboard of laden ships, especially tankers in such dangerous waters, would be detrimental to maritime safety and the protection of the marine environment. However, the delegation, after further investigation and relevant information received, had found no safety problem with South Africa's proposal and, therefore, now supported it.

14.6 The Sub-Committee agreed on this course of action to enable it to provide the necessary input to the SLF Sub-Committee and accordingly referred this issue to the Ships' Routeing Working Group for consideration and comments, as appropriate.

Terms of reference for the Ships' Routeing Working Group

14.7 The Sub-Committee instructed the Ships' Routeing Working Group to consider the background weather information with respect to the status of the current seasonal zone, wind velocities/direction, wind data areas including routeing measures, proposed seasonal zone and wave heights and direction and provide comments/recommendations with respect to extending the Summer Load Line 50 miles southward off Cape Agulhas for consideration and approval by Plenary.

Report of the Ships' Routeing Working Group

14.8 In considering the relevant part of the Ships' Routeing Working Group's report (NAV 56/WP.3, paragraphs 10.1 to 10.3), the Sub-Committee took action as indicated in the ensuing paragraphs.

[14.9 The Sub-Committee noted that there was no appreciable difference in sea and weather conditions between the current winter seasonal zone and the proposed new zone contained in the annex to document MSC 86/23/3 (South Africa) and invited the Committee to agree to the shift of the winter seasonal zone off the southern tip of Africa further southward by fifty miles, as proposed by South Africa.

14.10 The Secretariat was instructed to convey this outcome to the SLF Sub-Committee.]

14.11 The Committee was invited to consequently delete the item "Amendments to the 1966 LL Convention and the 1988 LL Protocol related to seasonal zone" from the Sub-Committee's biennial agenda, as the work on this item had been completed.

15 CASUALTY ANALYSIS

15.1 The Sub-Committee recalled that MSC 78 (MSC 78/26, paragraph 24.8) had decided that the item on "Casualty analysis" should remain on the work programme of the sub-committees.

15.2 The Sub-Committee noted that no documents had been either submitted for consideration or referred to by either the FSI Sub-Committee or any other technical body of the Organization for review, and consequently agreed to defer further consideration of the item to NAV 57.

16 CONSIDERATION OF IACS UNIFIED INTERPRETATIONS

16.1 The Sub-Committee recalled that, in order to expedite consideration of IACS unified interpretations being submitted to the Committee on a continuous basis, MSC 78 had decided that IACS should submit them directly and, as appropriate, to the sub-committees concerned. To this effect, MSC 78 had agreed to retain, on a continuous basis, the item on "Consideration of IACS unified interpretations" in the work programmes of the BLG, DE, FP, FSI, NAV and SLF Sub-Committees and to include it in the agenda for their next respective sessions.

16.2 The Sub-Committee recalled that it had considered proposals for IACS Unified Interpretations, at its fifty-second, fifty-third and fifty-fifth sessions. These were subsequently approved as MSC.1/Circ.1224 on Unified interpretations of SOLAS chapter V, MSC.1/Circ.1260 on Unified Interpretations of COLREG and MSC.1/Circ.1350 on Unified Interpretations of SOLAS regulation V/22.1.6 relating to navigation bridge visibility by MSC 82, MSC 84 and MSC 87, respectively.

16.3 The Sub-Committee recalled further that NAV 50 had considered on a preliminary basis the proposal by IACS (MSC 78/22/1, annex 7) regarding the IACS unified interpretation SC 139 relating to bridge visibility and invited Members to submit comments and detailed proposals on the matter for consideration at NAV 51. No document had been submitted by

IACS to NAV 51. IACS had submitted two documents to NAV 52, namely NAV 52/14 (UI's COLREG 1, 2, 3 and 4) which had clarified the application of Rules 23(a), 27(b) of the 1972 COLREGs and NAV 52/14/1 (UI SC 203) which had clarified the application of SOLAS regulation V/19.2.2.1 with respect to the gyrocompass. However, IACS had not re-submitted SC 139 (MSC 78/22/1, annex 7). At NAV 55, IACS had informed the Sub-Committee that they would submit any further relevant IACS Unified Interpretation proposals, including SC 139, to NAV 56.

16.4 The Sub-Committee noted that no new proposals had been submitted by IACS to this session.

16.5 The observer from IACS updated the Sub-Committee regarding IACS Unified Interpretation SC 139. This UI was first submitted to this Organization as an annex to document MSC 78/22/1. However, the Sub-Committee had, to date, not had the opportunity to consider this IACS UI. The Sub-Committee was invited to note that Revision 1 of this IACS UI was available on the IACS website. By way of general information, the Sub-Committee was advised that this IACS UI primarily addressed the use of remote camera installations on ships of unconventional design in order to comply with the provisions of SOLAS regulation V/22. The Sub-Committee would be aware that MSC 87, in May this year, had approved MSC.1/Circ.1350. Compared to the version agreed by NAV 55, small changes were made to this circular by MSC 87, based on an IACS submission – document MSC 87/9/2. However, the end of MSC 87 coincided with the deadline for submissions to NAV 56. Consequently, there was insufficient time for IACS to make a submission to NAV 56 regarding IACS UI SC 139 that takes due account of the final approved version of MSC.1/Circ.1350. In particular, what it appears IACS might need to do now was to review the scope of application of UI SC 139 – and the use of remote camera applications – in light of the interpretation provided in MSC.1/Circ.1350. IACS therefore advised the Sub-Committee that it intended to review carefully the outcome of discussions under this agenda item at this session, together with MSC.1/Circ.1350 and consider what, if any, consequences this had on the current version of UI SC 139 and advise NAV 57 accordingly.

16.6 The Sub-Committee invited IACS to submit any further relevant IACS Unified Interpretation proposals to NAV 57.

17 WORK PROGRAMME AND AGENDA FOR NAV 57

17.1 The Sub-Committee recalled that MSC 78 had agreed that a decision to include a new item in a sub-committee's work programme did not mean that the Committee agreed with the technical aspects of the proposal; and that detailed consideration of the technical aspects of the proposal and the development of appropriate requirements and recommendations should be left to the sub-committee concerned.

17.2 The Sub-Committee noted also that MSC 87 had considered document MSC 87/24/5 (Republic of Korea), proposing to develop guidelines containing a unified set of specifications for distress alert buttons and safe test functions, and agreed to include, in the post-biennial agenda of the Committee, an output on "Measures to avoid false distress alerts", with two sessions needed to complete the work, assigning the COMSAR Sub-Committee as the coordinating organ, in co-operation with the NAV Sub-Committee, as necessary and when requested by the COMSAR Sub-Committee.

Biennial and post-biennial agendas

17.3 Taking into account the progress made at the current session and the provisions of the Guidelines on the organization and method of work (MSC-MEPC.1/Circ.2, as amended), the Sub-Committee revised its biennial agenda and provisional agenda for NAV 57 (NAV 56/WP.2), as set out in annexes 1 and 2 for approval by the Committee.

Arrangements for the next session

17.4 The Sub-Committee anticipated that Working and Drafting Groups on the following subjects might be established at NAV 57:

- .1 Ships' Routeing;
- .2 Technical matters; and
- .3 e-navigation,

including a Drafting Group on Review of vague expressions in SOLAS regulation V/22.

Application of the Committee's Guidelines

17.5 The Sub-Committee noted that MSC 87 had endorsed the revised Guidelines on the organization and method of work and requested the Secretariat to take action accordingly

and approved, in principle, the draft MSC/MEPC circular on Guidelines on the organization and method of work with a view to further consideration at MEPC 61 and final approval at MSC 88. MSC 87 had also invited Member Governments to use the draft revised Guidelines when submitting proposals for new outputs, pending approval of the Guidelines by MEPC 61 and MSC 88. MSC 87 had decided to further consider whether to make the Guidelines available as a publication that can be downloaded from the IMO website at MSC 88.

Matters related to the High-level Action Plan of the Organization: Status of planned outputs for the 2010-2011 biennium and proposals for the High-level Action Plan of the Organization and priorities for the 2012-2013 biennium

17.6 The Sub-Committee noted that in considering the actions that could be taken by the subsidiary bodies, MSC 87 had agreed that the subsidiary bodies should prepare their respective biennial agendas for the next biennium at their forthcoming sessions, in accordance with the revised Guidelines, taking into account that:

- .1 outputs selected for the biennial agenda should be phrased in SMART terms; and
- .2 where the target completion year for a specific output went beyond that 2012-2013 biennium, an interim output should be placed in the biennial agenda with a target completion year of 2012 or 2013, as appropriate, and a related output should be placed in the Committee's post-biennial agenda with the anticipated completion year,

and requested the Secretariat, in consultation with the Chairmen, to prepare the initial proposals for consideration by the sub-committees accordingly.

17.7 The Sub-Committee noted and agreed to the information on the status of planned outputs of the High-level Action Plan relevant to the Sub-Committee, as set out in annex 4 to document NAV 56/WP.2.

17.8 The Sub-Committee noted and agreed to the information on the proposed outputs for the 2012-2013 biennium, including items to be included in the Committees' post-biennial agenda for the 2012-2013 biennium in SMART terms, as set out in annex 5 to document NAV 56/WP.2.

Date of the next session

17.9 The Sub-Committee noted that the fifty-seventh session of the Sub-Committee had been tentatively scheduled to be held from 6 to 10 June 2011 at IMO Headquarters.

18 ELECTION OF CHAIRMAN AND VICE-CHAIRMAN FOR 2011

18.1 In accordance with Rule 16 of the Rules of Procedure of the Maritime Safety Committee, the Sub-Committee unanimously re-elected Mr. J.M. Sollosi (United States) as the Chairman and elected Mr. Kostiantyn Billiar (Ukraine) as the new Vice-Chairman for 2011, respectively.

18.2 The Sub-Committee expressed its appreciation to its outgoing Vice-Chairman Mr. Raja Datuk Malik (Malaysia) for his invaluable contribution to the work of the Sub-Committee and wished him all the best for the future.

19 ANY OTHER BUSINESS**Assessment of the degree of risk of coastal maritime traffic**

19.1 The Sub-Committee considered document NAV 56/19 (IALA) providing details of the development of different tools to assist IALA Members to assess the risk along their coasts and to meet the requirements of SOLAS regulations V/12 and V/13.

19.2 The delegation of China informed the Sub-Committee that it had used the IALA Risk Management Tool for Ports and Restricted Waterways, specifically the PAWSA tool (a qualitative model) which allowed an authority to measure and quantify the risks of collisions and groundings in any waterway. The assessment revealed that a significant risk was present in Chinese coastal waters due to the high concentration of fishing vessels. Therefore, the Chinese delegation requested Member States to remind ships entitled to fly their flag when navigating in Chinese coastal waters, particularly in the waters congested with fishing vessels, to enhance watchkeeping, navigate carefully and keep safe speed. Furthermore, before entering Chinese ports, ships should obtain adequate safety information from the shipping agents concerned.

19.3 The delegation of South Africa, whilst welcoming the IALA Risk Management Tool for Ports and Restricted Waterways, noted that challenges remained regarding improving AtoN in some parts of the world.

19.4 The Sub-Committee noted the information provided by IALA and also agreed a draft SN circular, as set out in annex ..., providing guidance to Member Governments to assess the risks of collisions and groundings along their coasts and when planning to implement new measures to minimize the risk of coastal maritime traffic, for approval by the Committee.

Progress on standards development by the IEC

19.5 The Sub-Committee considered document NAV 56/19/1 (IEC) providing an update on the progress made in developing various standards for Bridge navigational watch alarm system (BNWAS), AIS search and rescue transmitter (AIS-SART), Digital Interface – Part 450, Integrated Navigation Systems – Part 2 and Class B shipborne equipment of the automatic identification system (AIS) and noted with appreciation the information provided.

19.6 The Sub-Committee requested IEC to keep the Sub-Committee updated on the progress made relating to various IEC standards.

Clarification in relation to carriage requirement for speed log devices for ships of 50,000 gross tonnage and upwards

19.7 The Sub-Committee considered document NAV 56/19/2 (IACS) requesting a clarification in relation to carriage requirement for speed log devices for ships of 50,000 gross tonnage and upwards. SOLAS chapter V, regulations V/19.2.3.4 and V/19.2.9.2 require that speed and distance measuring devices are installed as follows:

- .1 Ships of 300 gross tonnage and upwards and passenger ships irrespective of size shall be fitted with a speed log for measuring speed through water (SOLAS regulation V/19.2.3.4); and
- .2 Ships of 50,000 gross tonnage and upwards shall be fitted with a speed log for measuring speed over the ground in forward and athwartships direction (SOLAS regulation V/19.2.9.2).

19.8 The IACS observer stated that the following three alternatives had been discussed within IACS:

- .1 both regulations to be fulfilled by one device capable of measuring and indicating both speed through water and speed over the ground in forward and athwartships direction. Any single failure in such device may render both functions inoperable;
- .2 both regulations to be fulfilled by a combined device (a single transducer) which measures, and indicates, at separate locations both speed through water and speed over the ground in forward and athwartships direction. However, the means to measure and indicate are separated as far as possible such that failure of one means does not lead to the failure of the other means of measurement and indication; and
- .3 both regulations to be fulfilled by a separate device, i.e. one speed and distance measuring and indicating device capable of measuring speed through water and one separate speed and distance measuring and indicating device capable of measuring speed over the ground in forward and athwartships direction.

19.9 There was some discussion on the issue; however, opinion seemed to be divided as to which of the three alternatives was the preferred option. Delegations who spoke on the issue either had a preference for alternative one or alternative three. One delegation stated that Members should have the option to utilize any of the three proposed alternatives. However, there was no clear majority for any alternative proposed by IACS.

19.10 The observer from IACS informed the Sub-Committee that IACS would be submitting a document to MSC 88 on this issue.

IHO Publication "Facts about Electronic Charts and Carriage Requirements"

19.11 The Sub-Committee noted with interest the information provided by IHO (NAV 56/INF.4) concerning the updated 2nd edition of the IHO Publication S-66 on Facts about Electronic Charts and Carriage Requirements. This publication provides mariners and others with a range of practical information on ENC's and carriage requirements for ECDIS.

Improvement of Pilot Transfer Arrangements

19.12 The Sub-Committee noted with interest the information provided by IMPA (NAV 56/INF.12) regarding IMPA's Executive's resolve to hold a one-week Safety Campaign at the end of September 2010 involving all of its 8,000 members around the world, the results of which would be tabled at the NAV and DE Sub-Committees. IMPA would also request its members to circulate the resulting information to Port State Control officials in the ports where they provided pilotage services.

Information on Ships Operating with Sky-Sails

19.13 The Sub-Committee noted with interest the information provided by the United Kingdom (NAV 56/INF.15) regarding close sightings of vessels operating with sky-sails in the busy waters of the North Sea. It had recently been observed by the maritime community that commercial and fishing vessels were deploying sky-sails more frequently. Instead of a traditional sail, the sky-sail uses a large towing kite to assist the propulsion and are designed to reduce fuel consumption by up to 15%. Sky-sails operate between 100 m and 600 m above sea level depending on size. According to the details obtained from one manufacturer alone, by the end of 2010, approximately 25 ships equipped with sky-sails would be in service worldwide. The importance of developing appropriate guidance or recommended practices for vessels intending to deploy sky-sails, including notification to other ships and aircraft was highlighted. A coordinated approach from IMO and ICAO to introduce appropriate operational guidance, would be a way forward to avert a potential shipping incident or an aviation mishap.

Safety provisions applicable to tenders operating from passenger ships

19.14 The Sub-Committee noted that DE 53, recalling that the comments of the FP, COMSAR, NAV, SLF and STW Sub-Committees would be needed for the finalization of the Guidelines for tenders operating from passenger ships, had consequently established a drafting group and instructed it to prepare the consolidated draft Guidelines for passenger ship tenders, on the basis of documents DE 53/14 and DE 53/14/1, as well as a draft list of matters to be addressed by DE 54.

19.15 The Sub-Committee noted also that, having received the report of the drafting group (DE 53/WP.3), DE 53 approved it in general and, in particular, noted the consolidated draft Guidelines for passenger ship tenders, as set out in annex 1 to document DE 53/WP.3, which are subject to further input from the co-operating sub-committees, for further consideration at DE 54. Consequently, the Secretariat was requested to forward the report

of the drafting group (DE 53/WP.3), to all co-operating sub-committees, for their consideration and comments, so that such comments could be taken into account in the finalization of the draft Guidelines.

19.16 The Sub-Committee reviewed sections 7, 9, 10 and 11 of Annex 1 relating to the draft guidelines for passenger ship tenders that were of relevance to it and agreed to the following amendments:

"CONSTRUCTION AND EQUIPMENT GUIDANCE

7 Navigation^{al} equipment

7.1 The tender should be provided with the following navigational equipment:

- .1 compass;
- .⁴² required navigation lights and shapes;
- .²³ radar reflector;
- .³⁴ echo sounder;
- .⁴⁵ search light; and
- .⁵⁶ electric or manual whistle or equivalent sound signal.

9 Additional Equipment

9.1 The following additional equipment should be provided:

- .1 anchor and rope;
- .2 two boat hooks;
- .~~3~~ ~~compass~~;
- .⁴³ painters or mooring lines;
- .⁵⁴ fenders;
- .⁶⁵ bailing pump; and
- .⁷⁶ paddles or oars for tenders having single means of propulsion.

OPERATIONAL GUIDANCE**10 Preparation**

- 10.1 Appropriate arrangements should be made prior to arrival at a port where tenders will be operated.
- 10.2 Local chartlets produced from ship's **relevant** navigational chart or by alternative means, such as a drawing, should be prepared, if the local chart has insufficient detail.
- 10.3 Local instructions and notices, such as from harbour masters, should be obtained including local rules for avoiding collision (Rules of the road), if applicable.
- 10.4 Maximum operating range and limiting weather conditions should be established and documented.
- 10.5 Tender operation briefing prior to commencing operations should be conducted covering, in particular, the following items:
 - .1 voyage planning and operational restrictions:
 - .1 local rules for avoiding collision (Rules of the road) as applicable;
 - .2 currents and tides;
 - .3 sea conditions, both current and expected;
 - .4 weather forecast; and
 - .5 **local ships' routing systems** ~~route description~~ and areas to be avoided.
 - .2 communications plan; and
 - .3 landing areas and landing areas **s** security arrangements, in accordance with the ISPS Code.

- 10.6 Operations should be planned so that at any time during tender operations there is at least one other tender or vessel of sufficient capacity immediately available to provide emergency assistance.

11 Log-book and record keeping

- 11.1 The ship from which the tender is operating should maintain a log of the tender operations with information such as:

- .1 arrival/departure time at both ends;
- .2 passenger count; and
- .3 details of any other significant event.]"

19.17 The Secretariat was instructed to convey this outcome to the DE Sub-Committee. The Committee was invited to delete this item from the Sub-Committee's biennial agenda as the work had been completed.

Information on casualty investigation

19.18 The Ukrainian delegation informed the Sub-Committee on the outcome of an investigation into a casualty which occurred in March 2008, when the Chinese cargo ship **Yao Hai** collided with the Ukrainian-flagged vessel **Neftegaz-67** in the South China Sea. The latter subsequently sank taking the lives of 18 Ukrainian seafarers. The investigation into the casualty had been performed by Competent Authorities of the Hong Kong Special Administrative Region of the People's Republic of China with Ukrainian Authorities, representing the substantially interested State, participated in it. The results of the investigation had been examined by the Court of the first instance of the Hong Kong Special Administrative Region which adopted its verdict on 15 January 2010 sentencing the Ukrainian Master to imprisonment. Being dissatisfied with the way the results of the investigation into the casualty and certain rules of the 1972 COLREG regulations had been interpreted by the Court, Ukrainian Authorities addressed the Competent Authorities of the Hong Kong Special Administrative Region of the People's Republic of China and pointed out the discrepancies in the application of these rules in the **Neftegaz-67** case. The Ukrainian delegation expressed the hope that due attention would be given by the parties involved in the **Neftegaz-67** case to ensure coherent application of the 1972 COLREGs.

19.19 The Associate Member of Hong Kong, China in response to the statement by the delegation of Ukraine, stated that it was not the intention of Hong Kong, China to provide

details of the accident or comment on the Ukraine statement. However, the delegate informed the Sub-Committee that, in early 2010, the two Hong Kong pilots on board the bulk carrier and the two Masters of both vessels were convicted by the Court of the Hong Kong Special Administrative Region Government. It was understood that the two Masters and the two pilots had filed their appeal to the Court. The Marine Department of the Hong Kong Special Administrative Region Government had completed its investigation into the tragic accident some time ago but the investigation report would only be issued to the public when all the legal proceedings were completed. There was no doubt that when all legal proceedings were finished, the Committee or its sub-committees such as FSI or STW and this Sub-Committee would, given the opportunity, look into the causes of the accident at future sessions with a view to identifying if there were lessons to be learned to prevent recurrence of similar accidents; however, this could not be done at this stage on account of the appeal that the hearing was scheduled to commence next year.

19.20 The Sub-Committee took note of the information provided.

Canadian NORDREG reporting system

19.21 The delegation of the United States stated that, on 1 July, the Northern Canada Vessel Traffic Services Zone Regulations had come into effect. Among other things, the new regulations contained provisions on mandatory ship reporting and the regulation of transiting vessels that, in the view of the United States, raised some critical issues with respect to consistency with international law. The United States complimented Canada's efforts to provide for the safety of navigation and protection of the marine environment in the Arctic area. As conditions in the Arctic evolved, all Arctic coastal States would need to consider new ways to protect and preserve this sensitive region. At the same time, the United States wished to note the important role of the Organization in the development of such measures. The United States did not believe that the new Canadian northern zone regulations were consistent with key law of the sea principles related to freedom of navigation, including the right of innocent passage and the right of transit passage through straits used for international navigation. However, the United States supported the stewardship goals of the proposed Canadian NORDREG Zone Regulations. In the view of the United States, Arctic coastal States should propose such measures to the Organization to receive the most solid foundation for them, rather than act unilaterally. The United States welcomed the opportunity to work with Canada and with others on this issue within the Organization.

19.22 The delegation of Canada stated that pursuant to Canada's Northern Strategy for enhancing their stewardship in the Arctic, Canada had replaced its voluntary Arctic reporting system, which had been in place for over 30 years, with a mandatory reporting system. At the same time, it had also formally established the vessel traffic services zone that covered the reporting area, known as NORDREG. Regulations giving effect to these changes had come into force on 1 July 2010. The reporting area covered Canada's northern waters out to the limit of its Exclusive Economic Zone. As provided for in SOLAS regulation V/11.4, Canada intended, in the near future, to submit to the Organization details of the reporting system for recognition and dissemination. The purpose of the new regulations was to promote safe and efficient navigation and protect the Arctic marine environment. The Marine Communication and Traffic Services of the Canadian Coast Guard provided information that contributed to onboard navigational decision-making, including up-to-date ice routing information and conditions, and icebreaker assistance. The information from vessel reports and the communication link between vessel traffic services and the vessel were critical to preventing accidents and responding effectively to emergencies including search and rescue and pollution response. The Regulations were consistent with international law. In particular, Article 234 of the 1982 United Nations Convention on the Law of the Sea provides that "Coastal States have the right to adopt and enforce non-discriminatory laws and regulations for the prevention, reduction and control of marine pollution from vessels in ice-covered areas within the limits of the exclusive economic zone". Moreover, not only are the regulations consistent with SOLAS V, regulations V/11 and V/12, the reporting requirements and format were based on accepted international guidelines for ship reporting systems.

19.23 The BIMCO observer stated that they fully acknowledged the particularly sensitive nature of the Arctic as well as its strategic importance and understood the background for Canada's overall wish for the Arctic marine environment to be properly protected. In February 2010, BIMCO had provided comments on the proposed Canadian Regulation relating to the Northern Canada Vessel Traffic Services Zone. BIMCO had noted that reporting requirements would be based on international principles for ship reporting systems consistent with international law regarding ice-covered areas. In this respect, the consultation undertaken on the proposed regulation appeared to have focused exclusively on national entities and BIMCO found it was relevant to provide input from a global industry perspective. BIMCO had expressed concern that the informal NORDREG zone would be made mandatory and extended to 200 nautical miles. As a consequence, vessels of the prescribed classes would be required to obtain clearance for the NORDREG zone and to make reports.

A decision would be taken whether clearance should be granted and, without clearance, a vessel would not be authorized to proceed. The risk of not being granted authorization to proceed in case of non-compliance caused concern, as this could be seen as effectively interfering with the right to innocent passage. From BIMCO's perspective, it would have been desirable if the regulation had been brought forward for evaluation in the Sub-Committee.

19.24 The Sub-Committee took note of the information provided.

Regional marine electronic highway in the East Asian seas

19.25 Recalling that, at previous sessions, the Secretariat had updated the Sub-Committee on the key elements and expected outputs of the new project for the Development of a Regional Marine Electronic Highway (MEH) in the East Asian Seas including the progress made, the Sub-Committee noted that the MEH Demonstration Project was in its fourth year of implementation. Under the GEF/IBRD-funded project, a hydrographic survey of a portion of the Traffic Separation Scheme (TSS) in the Straits of Malacca and Singapore covering approximately 621.3 square kilometres (14.38% of the total TSS area) has been carried out. Apart from the hydrographic survey, other ongoing activities included procurement of goods and services and initiating the operational phase of the Project. The Programme Coordination Officer of the Secretariat's Marine Environment Division had been posted in Indonesia starting 4 February 2010 and was presently overseeing and managing the Project from Jakarta. The project had organized its Third Project Steering Committee (PSC) Meeting in July 2010 to review the progress of the Project implementation and to chart the forthcoming activities of the Project as well as to prepare for the mid-term review to be carried out by the World Bank following the PSC meeting.

Expressions of appreciation

19.26 The Sub-Committee further expressed appreciation to the following delegates:

[more text to come]

20 ACTION REQUESTED OF THE COMMITTEE

[to be prepared by the Secretariat]