



SUB-COMMITTEE ON SAFETY OF
NAVIGATION
53rd session
Agenda item 22

NAV 53/WP.8
27 July 2007
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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-third session from 23 to 27 July 2007 at the Royal Horticultural Halls and Conference Centre, London under the chairmanship of Mr. K. Polderman (The Netherlands). The Vice-Chairman, Mr. J. M. Sollosi (United States), was also present.

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

[ALGERIA	GREECE
ANGOLA	ICELAND
ANTIGUA AND BARBUDA	INDONESIA
ARGENTINA	IRAN (ISLAMIC REPUBLIC OF)
AUSTRALIA	IRELAND
BAHAMAS	ISRAEL
BARBADOS	ITALY
BELGIUM	JAPAN
BOLIVIA	KENYA
BRAZIL	KUWAIT
CANADA	LATVIA
CHILE	LIBERIA
CHINA	MALAYSIA
COLOMBIA	MALTA
CUBA	MARSHALL ISLANDS
CYPRUS	MEXICO
DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA	NETHERLANDS
DENMARK	NIGERIA
DOMINICAN REPUBLIC	NORWAY
ECUADOR	PANAMA
EGYPT	PAPUA NEW GUINEA
ESTONIA	PERU
FINLAND	PHILIPPINES
FRANCE	POLAND
GERMANY	PORTUGAL
GHANA	REPUBLIC OF KOREA
	ROMANIA

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 SAUDI ARABIA
 SINGAPORE
 SOUTH AFRICA
 SPAIN
 SWEDEN
 SYRIAN ARAB REPUBLIC
 THAILAND

TURKEY
 TUVALU
 UNITED KINGDOM
 UNITED STATES
 URUGUAY
 VANUATU
 VENEZUELA]

the following Associate Member of IMO:

HONG KONG, CHINA

and the following IMO non-Member:

COOK ISLANDS

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

INTERNATIONAL HYDROGRAPHIC ORGANIZATION (IHO)
 EUROPEAN COMMISSION (EC)
 MARITIME ORGANISATION FOR WEST AND CENTRAL AFRICA (MOWCA)
 INTERNATIONAL MOBILE SATELLITE ORGANIZATION (IMSO)
 INTERNATIONAL CHAMBER OF SHIPPING (ICS)
 INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO)
 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)
 INTERNATIONAL RADIO MARITIME COMMITTEE (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 FEDERATION OF SHIPMASTERS' ASSOCIATIONS (IFSMA)
 INTERNATIONAL ASSOCIATION OF INDEPENDENT TANKER OWNERS
 (INTERTANKO)
 ADVISORY COMMITTEE ON PROTECTION OF THE SEA (ACOPS)
 SOCIETY OF INTERNATIONAL GAS TANKER AND TERMINAL
 OPERATORS LIMITED (SIGTTO)
 INTERNATIONAL MARITIME RESCUE FEDERATION (IMRF)
 CRUISE LINES INTERNATIONAL ASSOCIATION (CLIA)
 INTERNATIONAL ASSOCIATION OF DRY CARGO SHIPOWNERS
 (INTERCARGO)
 IBEROAMERICAN INSTITUTE OF MARITIME LAW (IIDM)
 INTERNATIONAL SAILING FEDERATION (ISAF)

THE INTERNATIONAL MARINE CONTRACTORS ASSOCIATION (IMCA)
WORLD NUCLEAR TRANSPORT INSTITUTE (WNTI)
INTERNATIONAL HARBOUR MASTERS' ASSOCIATION (IHMA)
THE ROYAL INSTITUTION OF NAVAL ARCHITECTS (RINA)

1.4 In welcoming the participants, the Secretary-General stressed that, with regard to this year's theme for World Maritime Day: "IMO's response to current environmental challenges", this would be an opportunity to increase awareness about the threats to the environment stemming from shipping operations and, by taking appropriate preventive and remedial action, to show that the maritime sector does care about the environment and is, indeed, already at the forefront of that challenge. Over the years, Governments and the industry had adopted, through IMO, a wide range of measures to prevent and control any pollution caused by ships and to reduce the impact that shipping may have on our fragile environment. In this context, he also alluded to the Sub-Committee's contribution, particularly through its ceaseless efforts to enhance navigational safety, thereby reducing accidental pollution caused as a result of collisions or groundings.

Turning to the Sub-Committee's work at the current session, the Secretary-General referred to the development of an e-navigation strategy, and the Sub-Committee's continuous efforts towards mapping out a strategic vision to enable the integration of existing and new navigational tools, in particular electronic tools, in an all-embracing system that would contribute to enhanced navigational safety, while simultaneously reducing the burden on the navigator. As the technical and regulatory evolution of the system moved forward, it should not to be seen as an end in itself or as a panacea, but also here the human element should remain the key component in any integrated and coordinated e-navigation concept.

Whilst the basic technologies for an e-navigation system were available, the challenges lay, on the one hand, in ensuring the availability of all the other components (including electronic navigational charts) and, on the other, in combining them, in a holistic and systematic manner, so that they could be used effectively to simplify the display of all pertinent navigational information, thus enabling the mariner to be aware, in real-time, of the environment in which his or her ship was navigating. This would have a significant beneficial effect in enhancing navigational safety, accident prevention and environmental protection and, at the same time, deliver substantial operating efficiencies with consequent economic benefits far into the future.

Referring to the various items of operational significance on the Sub-Committee's agenda for the current session, the Secretary-General highlighted that no less than twenty-two proposals on

ships' routing, ship reporting and other relevant measures all aimed at enhancing the safety of navigation in areas of identified navigational hazards and environmentally sensitive sea areas were to be considered.

Reminding the Sub-Committee of the importance of the role of the human element in safety of navigation, which could never be overemphasized, and the significance of the man/machine interface in safe operations, which was widely recognized, he referred to the ergonomic issues with respect to shipboard operations the Sub-Committee had been addressing for some time. In this regard he was confident that the Sub-Committee would be able to finalize the revision of the performance standards for Integrated Navigation Systems. This would assist ships' officers to become familiar with, and competent in, making full and effective use of the shipborne navigational equipment they came across in today's technologically-advanced ships.

Still on the issue of performance standards, the Secretary-General observed that MSC 82, acting on the Sub-Committee's recommendation, had adopted revised performance standards for Electronic Chart Display and Information Systems (ECDIS), which, under the revised SOLAS regulation V/19, might be accepted as meeting the chart carriage requirements. The Sub-Committee had been further instructed to review those performance standards; assess whether a common layout, names or symbols and display for controls could be appropriately included therein; and advise MSC 83 accordingly.

Furthermore, at this session, the Sub-Committee was also expected to finalize work on the evaluation of the use of ECDIS, including the evaluation of Electronic Navigational Chart availability and the development of a comprehensive online catalogue of available official charts. Specific proposals for the mandatory carriage requirements of ECDIS, by 1 July 2010, had been tabled for the current session. The Sub-Committee's task in considering them had been facilitated by IHO's evaluation of the availability of electronic navigational charts worldwide. IHO's report on this had indicated that there would be adequate coverage of uniform ENCs by the time IMO adopted relevant mandatory carriage requirements. He was pleased to note that IHO would continue to work to improve the global availability and consistency of ENCs and, wherever possible, to accelerate their production process. Substantial progress on these matters would have a direct bearing on the successful development of e-navigation, which pointed to the seriousness of the issue in hand.

With respect to navigational aids and related issues, he noted that the Sub-Committee should also be able to finalize, at the current session, performance standards for navigation lights, navigation light controllers and associated equipment, whilst also finalizing guidelines for the installation of shipborne radar equipment and on the control of ships in an emergency.

1.5 The Chairman thanked the Secretary-General for his words of encouragement and stated that his advice and requests would be given every consideration in the Sub-Committee's deliberations.

Adoption of the agenda

1.6 The Sub-Committee adopted the agenda, as approved by MSC 82 (NAV 53/1).

2 DECISIONS OF OTHER IMO BODIES

2.1 The Sub-Committee noted, in general, decisions and comments (NAV 53/2, NAV 53/2/1 and Add.1, NAV 53/2/2 and NAV 53/2/3) pertaining to its work made by MSC 82, DSC 11, COMSAR 11, DE 50, FSI 15 and MEPC 56 and considered them under the appropriate agenda items.

Outcome of FSI 15

Code for the implementation of mandatory IMO instruments

2.2 The Sub-Committee considered document NAV 53/2/2 (Secretariat) relating to the amendments to the Code for the implementation of mandatory IMO instruments. The Sub-Committee noted that FSI 15 (FSI 15/18, paragraph 3.9), having taken into account MSC 82's instruction regarding the proposed amendment to move the references to SOLAS regulations V/4 and V/9, contained in annex 1 on obligations of Contracting Governments/Parties, to annex 3 on specific obligations for coastal States, agreed to the draft Revised Code for the Implementation of Mandatory IMO Instruments and the associated draft Assembly resolution, (FSI 15/18/Add.1, annex 1), for approval by MEPC 56 and MSC 83 prior to submission to the Council and the Assembly at its twenty-fifth session for adoption.

2.3 The Sub-Committee further observed that in this context C 98, when considering the report of MSC 82, noted that on the related issue of amendments to resolution A.974(24) on Framework and procedures for the Voluntary IMO Member State Audit Scheme, Member Governments and NGOs should bear in mind that any proposals for amendments thereto needed to be submitted directly to the Council for consideration.

3 ROUTEING OF SHIPS, SHIP REPORTING AND RELATED MATTERS

General

3.1 The Chairman recalled that during NAV 51 (NAV 51/19, paragraph 3.4), in summing up the extensive discussion on the quality of ships' routeing proposals, he had stressed the need to use a procedure similar to the one being presently used by the Committee for the assessment of proposals for new work programme items to pre-assess such proposals. He had further recommended that for future sessions of the Sub-Committee, a preliminary assessment of these proposals would be made by him in consultation with the Secretariat and the Chairman of the Ships' Routeing Working Group, following the general criteria in MSC/Circ.1060 and MSC.1/Circ.1060/Add.1 without addressing 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. The Sub-Committee had supported this proposed course of action.

3.2 The Chairman informed the Sub-Committee that accordingly, he had in co-operation with the Secretariat prepared document NAV 53/WP.1, outlining a preliminary assessment of the ships' routeing and ship reporting proposals. The Sub-Committee considered document NAV 53/WP.1 and noted that, 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 Scheme – “Maas North-West”

3.3 At the request of the Government of the Netherlands, the Sub-Committee briefly considered a proposal (NAV 53/3/2, annex 1) for the establishment of a new traffic separation scheme “Maas North-West” forming part of the routeing system “In the Approaches to Hook of Holland and at North Hinder”.

New Mandatory Traffic Separation Schemes – “Galapagos Area to be Avoided (ATBA)”

3.4 At the request of the Government of Ecuador, the Sub-Committee briefly considered a proposal (NAV 53/3/3) for the establishment of a new ships' routeing system comprising two mandatory traffic separation schemes for the approach to the “Galapagos Area to be Avoided (ATBA)” and Particularly Sensitive Sea Area (PSSA). The proposed routeing system is an associated protective measure (APM) designed to protect the island marine ecosystem of the PSSA, helping to preserve its unique character as a world natural heritage site. The main purpose

of the routing system is to protect the marine environment, human life at sea and the safety of navigation, and prevent or reduce the risk of pollution or any other damage to the marine environment caused by the collision or grounding of ships in or near sensitive areas.

New Traffic Separation Schemes – “On the approaches to the Polish ports in the Gulf of Gdańsk”

3.5 At the request of the Government of Poland, the Sub-Committee briefly considered a proposal (NAV 53/3/7, annex 1) to establish new traffic separation schemes “On the approaches to the Polish ports in the Gulf of Gdańsk”.

New Traffic Separation Schemes and attached two-way routes – “Off the southwest coast of Iceland”

3.6 At the request of the Government of Iceland, the Sub-Committee briefly considered a proposal (NAV 53/3/8, annexes 2 and 3) for the establishment of new routing measures “Off the southwest coast of Iceland” consisting of a new traffic separation scheme northwest of Gardskagi Point with attached two-way routes at both ends; and a new traffic separation scheme southwest of the Reykjanes Peninsula, with an attached two-way route.

Amendments to existing Traffic Separation Schemes (TSSs)

Amendments to the “Mandatory route for tankers from North Hinder to the German Bight and vice versa” and to related traffic separation schemes “Off Texel”, “Off Vlieland, Vlieland North and Vlieland Junction”, “Terschelling-German Bight” and “German Bight western approaches”

3.7 At the request of the Governments of Germany, the Netherlands, and the United Kingdom, the Sub-Committee briefly considered a proposal (NAV 53/3/1) for amendments to the application paragraph of the “Mandatory route for tankers from North Hinder to the German Bight and vice versa” and consequential amendments to related Traffic Separation Schemes “Off Texel”, “Off Vlieland, Vlieland North and Vlieland Junction”, “Terschelling-German Bight” and “German Bight western approaches”. The proposed amendments are a consequence of the revised Annex II to MARPOL 73/78, which entered into force on 1 January 2007.

Amendments to the existing Traffic Separation Scheme “In the approaches to Hook of Holland and at North Hinder”

3.8 At the request of the Government of the Netherlands, the Sub-Committee briefly considered proposals (NAV 53/3/2, annex 2 and NAV 53/3/6, annex 1) to amend the existing traffic separation scheme “In the Approaches to Hook of Holland and at North Hinder”.

Amendments to the existing Traffic Separation Scheme “In the Sound”

3.9 At the request of the Governments of Denmark and Sweden, the Sub-Committee briefly considered a proposal (NAV 53/3/10) to amend the existing traffic separation scheme “In the Sound” between Denmark and Sweden.

Amendments to the existing Traffic Separation Scheme “In the Approaches to Chedabucto Bay”

3.10 At the request of the Government of Canada, the Sub-Committee briefly considered a proposal (NAV 53/3/14) to amend the existing traffic separation scheme “In the Approaches to Chedabucto Bay” for enhancing the safety of navigation by reducing the risk of collision and grounding.

Amendments to the traffic separation scheme “In the Strait of Dover and Adjacent Waters”

3.11 At the request of the Governments of Belgium, France and the United Kingdom, the Sub-Committee briefly considered a proposal (NAV 53/3/18) to amend one of the three existing traffic separation schemes and the Precautionary Area in the vicinity of the Foxtrot 3 station, located at the north east extremity of the Dover Strait, for the purposes of better managing the flow of crossing traffic in the general area and thus the preservation of navigational safety and the protection of the marine environment.

Routeing measures other than Traffic Separation Schemes (TSSs)**Establishment of an Area to be Avoided and modifications to the breadth of the Safety Zones around Oil Rigs located off the Brazilian Coast – Campos Basin**

3.12 At the request of the Government of Brazil, the Sub-Committee briefly considered a proposal (NAV 53/3) supplemented by a study carried out by DNV and PETROBAS (NAV 53/INF.2), which aims 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. The second part of the proposal would extend the safety zones around the units which constitute this oil production system, taking into consideration the peculiarities of each one of them, with a view to avoiding environmental damage caused by any collision of a vessel.

3.13 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, taking into consideration that there were not any established procedures and guidelines in order to determine any proposed extension.

3.14 The delegation of the United Kingdom stated that it supported Brazil's proposal to designate an "Area to be Avoided" off their south east coast and to extend other safety zones. The United Kingdom delegation also expressed its desire that any approval of Brazil's proposal should include a "sunset review clause" whereby any such measures should be reviewed by the Organization following a fixed period of time.

3.15 The delegation of the United States thanked Brazil for their proposal and bringing the issue of an expanded safety zone to the attention of the Sub-Committee. That delegation stated that it recognized that Article 60(5) of UNCLOS allowed the Sub-Committee to consider such types of proposals; but it had no procedures to guide it in judging these proposals. For example, Article 60(5) mentioned structures, installations or artificial islands. The United States was unsure that FPSOs were covered by these categories. Also, there were other types of units in the EEZ, such as windfarms that also needed to be addressed. It was for this reason that the delegation urged caution and deliberation in considering the safety zone part of the proposal. Specifically, they believed that the Sub-Committee should develop uniform procedures, and guidelines by which safety zone proposals should be considered. Otherwise, the Sub-Committee would be considering 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, in their view, ensure that safety of navigation was taken consistently into account. Proposals should be judged on an objective basis such that the size of any adopted safety zone was no larger than the minimum necessary to achieve safety of navigation.

Amendment and expansion of the six existing Area to be avoided "In the Region of the North-West Hawaiian Islands"

3.16 At the request of the Government of the United States, the Sub-Committee briefly considered a proposal (NAV 53/3/4) to amend and expand the six existing Areas to be Avoided "In the Region of the North-West Hawaiian Islands". The purpose of this proposal is to increase maritime safety where navigation is particularly hazardous, protect the fragile environment,

preserve cultural resources and areas of cultural importance significant to native Hawaiians, and facilitate the ability to respond to developing maritime emergencies.

Amendment to the Deep-water route leading to Europoort

3.17 At the request of the Government of the Netherlands, the Sub-Committee briefly considered a proposal (NAV 53/3/6, annex 2) for an amendment to the deep-water route leading to Europoort.

Amendment to the Area to be Avoided “At Maas Centre” and “At North Hinder Junction Point”

3.18 At the request of the Government of the Netherlands, the Sub-Committee briefly considered a proposal (NAV 53/3/6, annex 3) for an amendment to the Area to be Avoided “At Maas Centre” and “At North Hinder Junction Point”.

Recommendations on navigation to the Polish ports through the Gulf of Gdańsk traffic area

3.19 At the request of the Government of Poland, the Sub-Committee briefly considered a proposal (NAV 53/3/7, annex 2) on recommendations concerning navigation in and through the proposed new mandatory ship reporting area and near the proposed new traffic separation schemes in the Gulf of Gdańsk.

Establishment of a new two-way route – Off the southwest coast of Iceland

3.20 At the request of the Government of Iceland, the Sub-Committee briefly considered a proposal (NAV 53/3/8, annex 1) for the establishment of routeing measures off the southwest coast of Iceland consisting of a new two-way route located between the two proposed eastern and western Area to be Avoided.

Establishment of Areas to be Avoided – Off the south and southwest coast of Iceland

3.21 At the request of the Government of Iceland, the Sub-Committee briefly considered a proposal (NAV 53/3/9) for the establishment of routeing measures off the south, southwest and west coast of Iceland consisting of two Areas to be Avoided, an eastern area and a western area plus an Area to be Avoided in shallow waters in Faxaflói Bay.

Amendments to the Recommendation on navigation through the entrances to the Baltic Sea

3.22 At the request of the Governments of Denmark and Sweden, the Sub-Committee briefly considered a proposal (NAV 53/3/11) to amend the existing resolution MSC.138(76) regarding recommendation on navigation through the entrances to the Baltic Sea.

3.23 The delegation of Finland stated that it supported all kind of relevant actions for enhancing navigational safety through the entrances to the Baltic sea. However, resolution MSC.138(76) had been discussed to be in line with UNCLOS regulations in theory only while, unfortunately, in practice it had been different. It was a practice by Danish authorities to complain against all ships, even with experienced captains, which did not use pilots in the entrances to the Baltic sea by stating that “above mentioned ship failed to follow safe navigation practices and procedures”. This meant that Denmark had complained that masters purely on the grounds of not using a pilot had violated maritime law regarding good seamanship. The Finnish delegation felt that complying with UNCLOS was essential both in theory and practice. Therefore, they were of the opinion that this matter should also be discussed when considering document NAV 53/3/11 in the Ships’ Routeing Working Group, bearing in mind that resolution MSC.138(76) was a recommendation only.

Establishment of new mandatory No Anchoring Areas on Sharks Bank and Long Shoal

3.24 At the request of the Government of Barbados, the Sub-Committee briefly considered a proposal (NAV 53/3/12) for the establishment of two new mandatory no anchoring areas on Sharks Bank and Long Shoal on the southwest and west coasts of Barbados by all ships on Sharks Bank, and ships 25ft and greater on Long Shoal.

Establishment of a seasonal Area to be avoided “In Roseway Basin, South of Nova Scotia”

3.25 At the request of the Government of Canada, the Sub-Committee briefly considered a proposal (NAV 53/3/13) to establish a recommended **seasonal** Area to be Avoided “In Roseway Basin, south of Nova Scotia”. The objective of this proposal is to reduce the likelihood of ship strikes causing deaths and serious injuries to right whales from June through December. This would redirect ship traffic from an area with the highest density of right whales to areas where there is a lower density.

Amendments to the northerly and southerly limits of the Sandtiet Deep-Water route and an amendment to the position of the Foxtrot 3 station

3.26 At the request of the Government of the United Kingdom, the Sub-Committee briefly considered a proposal (NAV 53/3/16) as a consequence of the proposal by Belgium, France and the United Kingdom (NAV 53/3/18) to amend the traffic separation scheme “In the Strait of Dover and Adjacent Waters” in the vicinity of the Foxtrot 3 station. The amendments relate to:

- .1 the northerly and southerly limits of the Sandtiet deep-water route; and
- .2 the position of the Foxtrot 3 station including the position of Area to be Avoided around this feature.

Amendments to the Recommendations on Navigation through the English Channel and the Dover Strait

3.27 At the request of the Government of the United Kingdom, the Sub-Committee briefly considered a proposal (NAV 53/3/17) to update the “Recommendations on Navigation through the English Channel and the Dover Strait”, as a consequence, primarily, of the mandatory ship reporting system in the Dover Strait/Pas de Calais.

Amendments to the Deep-Water Route “North-east of Gedser”

3.28 At the request of the Governments of Denmark and Germany, the Sub-Committee briefly considered a proposal (NAV 53/3/19) to amend the information given concerning the minimum depth of water below mean sea level, in the deep water route “North-east of Gedser”.

Mandatory ship reporting systems**New recommendatory/mandatory ship reporting system for the Papahānaumokuākea Marine National Monument**

3.29 At the request of the Government of the United States, the Sub-Committee briefly considered a proposal (NAV 53/3/5) for the establishment of a new partly recommendatory and partly mandatory ship reporting system for the Papahānaumokuākea Marine National Monument, which would be recommendatory for ships transiting through the Monument, and would be mandatory for ships entering or departing a United States port or place. The objective of this system is to improve maritime safety where navigation is particularly hazardous, protect the fragile environment, preserve cultural resources and areas of cultural importance significant to native Hawaiians, and facilitate the ability to respond to developing maritime emergencies.

New mandatory ship reporting system “On the approaches to the Polish ports in the Gulf of Gdańsk”

3.30 At the request of the Government of Poland, the Sub-Committee briefly considered a proposal (NAV 53/3/7, annex 3) to establish a new mandatory ship reporting system within the Polish territorial and internal waters in the Gulf of Gdańsk.

New mandatory ship reporting system “Off the south and southwest coast of Iceland”

3.31 At the request of the Government of Iceland, the Sub-Committee briefly considered a proposal (NAV 53/3/20) for the establishment of a new mandatory ship reporting system, off the south and southwest coasts of Iceland.

Amendments to the existing mandatory ship reporting systems “Off Ushant”, “Off Les Casquets” and “Dover Strait/Pas de Calais”

3.32 At the request of the Governments of France and the United Kingdom, the Sub-Committee briefly considered a proposal (NAV 53/3/15) to amend and standardize the reporting format for the three mandatory ship reporting systems in the Channel: “Off Ushant” (OUESSREP), “Off Les Casquets” (MANCHEREP) and “Dover Strait/Pas de Calais” (CALDOVREP).

Review of adopted mandatory ship reporting systems

3.33 The Chairman recalled that, at NAV 52, he had taken the initiative to bring to the attention of Members the need for carrying out an evaluation of existing mandatory ship reporting systems as specified in resolution MSC.43(64) – Guidelines and criteria for ship reporting systems, as amended by resolutions MSC.111(73) and MSC.189(79) relating to ship reporting systems. In addition, SOLAS regulation V/11.11 stated that the Organization shall ensure that adopted ship reporting systems are reviewed under the guidelines and criteria developed by the Organization. Lastly, section 4.4 of resolution MSC.43(64), as amended, stated that the Organization should provide a forum for the review and re-evaluation of systems, as necessary, taking into account the pertinent comments, reports, and observations of the systems.

3.34 The Chairman suggested once again that Members should undertake a review and re-evaluation of existing mandatory ship reporting systems based on the operational experience gained and take action, as appropriate.

Terms of Reference for the Working Group

3.35 After a preliminary discussion, as reported in paragraphs 3.1 to 3.34 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 from an operational point of view all documents submitted under item 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 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
- .3 submit a report to Plenary on Thursday, 26 July 2007 for consideration at Plenary.

Report of the Ships' Routeing Working Group

[3.36 Having received and considered the Working Group's report (NAV 53/WP.3), the Sub-Committee approved it in general and, in particular (with reference to paragraphs 3.1 to 8.1) took action as summarized hereunder.]

[New traffic separation schemes (TSSs)]

New Traffic Separation Scheme – “Maas North-West” forming part of the routeing system “In the Approaches to Hook of Holland and at North Hinder”

3.37 The Sub-Committee approved the proposed new traffic separation scheme “In the Approaches to Hook of Holland and at North Hinder” with some corrections to the description as set out in annex ..., which the Committee is invited to adopt.

New Mandatory Traffic Separation Schemes – Galapagos Area to be Avoided (ATBA) and PSSA

3.38 The Sub-Committee, in reviewing the proposal from Ecuador to establish two mandatory Traffic Separation Schemes (TSSs), agreed with the objectives of the proposal and the need to

protect the Galapagos. Bearing in mind that there was very little traffic flow in the area proposed by Ecuador, the Sub-Committee could not agree that a TSS was the most appropriate measure. Therefore, to accomplish the objectives of the Ecuadorean proposal, the Sub-Committee agreed that recommended tracks, that would be mandatory as a condition of port entry, would be the most appropriate measure.

3.39 Accordingly, the Sub-Committee approved the recommended tracks which would be mandatory as a condition of port entry through the Galapagos Area to be Avoided to enter the Particularly Sensitive Sea Area (PSSA) as set out in annex ..., which the Committee is invited to adopt.

New Traffic Separation Schemes – On the approaches to the Polish ports in the Gulf of Gdańsk

3.40 The Sub-Committee approved the proposed new traffic separation schemes in the approaches to the Polish ports in the Gulf of Gdańsk with some corrections to the description as set out in annex ..., which the Committee is invited to adopt.

New Traffic Separation Schemes and attached two-way routes – Off the southwest coast of Iceland

3.41 The Sub-Committee approved the proposed new traffic separation schemes and two-way routes “off the southwest coast of Iceland” with some corrections to the description as set out in annex ..., which the Committee is invited to adopt.

Amendments to existing traffic separation schemes (TSSs)

Amendments to the “Mandatory route for tankers from North Hinder to the German Bight and vice versa” and to related traffic separation schemes “Off Texel”, “Off Vlieland, Vlieland North and Vlieland Junction”, “Terschelling-German Bight” and “German Bight western approaches”

3.42 The Sub-Committee approved the proposed amendments to the existing “Mandatory route for tankers from North Hinder to the German Bight and vice versa” and to related traffic separation schemes “Off Texel”, “Off Vlieland, Vlieland North and Vlieland Junction”, “Terschelling-German Bight” and “German Bight western approaches” as set out in annex ..., which the Committee is invited to adopt.

Amendments to the existing Traffic Separation Scheme “In the approaches to Hook of Holland and at North Hinder”

3.43 The Sub-Committee approved the proposed amendments to the existing traffic separation scheme “In the Approaches to Hook of Holland and at North Hinder” with some corrections to the description as set out in annex ..., which the Committee is invited to adopt.

Amendments to the existing Traffic Separation Scheme “In the Sound”

3.44 The Sub-Committee approved the proposed amendments to the existing traffic separation scheme “In the Sound” with some corrections to the description as set out in annex ..., which the Committee is invited to adopt.

Amendments to the existing Traffic Separation Scheme “In the Approaches to Chedabucto Bay”

3.45 The Sub-Committee approved the proposed amendments to the existing traffic separation scheme “In the Approaches to Chedabucto Bay” with some corrections to the description as set out in annex ..., which the Committee is invited to adopt.

Amendments to the existing traffic separation scheme “In the Strait of Dover and Adjacent Waters”

3.46 The Sub-Committee approved the proposed amendments to the existing traffic separation scheme “In the Strait of Dover and Adjacent Waters” in the vicinity of the Foxtrot 3 station with some corrections to the description as set out in annex ..., which the Committee is invited to adopt.

Routeing measures other than traffic separation schemes (TSSs)**Establishment of an Area to be Avoided and modifications to the breadth of the Safety Zones around Oil Rigs located off the Brazilian Coast – Campos Basin**

3.47 The Sub-Committee noted that the majority of the group was concerned and did not agree to the extension of the safety zones, taking into consideration that there were not any established procedures and guidelines in order to determine the proposed extension.

3.48 The Sub-Committee also noted that the delegation of the United Kingdom supported by others had stressed that every coastal State which authorized and regulated the operation and use of offshore installations and structures under its jurisdiction should follow the Recommendation on Safety zones and safety of navigation around offshore installations and structures as outlined in resolution A.671(16). Article 60.5 of UNCLOS related to artificial islands, installations and structures in the exclusive economic zone stated that safety zones should not exceed a distance of 500 metres around them. Accordingly, the delegation of the United Kingdom had suggested two options namely:

- .1 accepting the extended safety zones subject to a revision after a period of 2-3 years to be accepted in plenary; and
- .2 acceptance of 500-metre safety zones with a view to Brazil returning to IMO if extended safety zone was required in view of operational experience.

3.49 The Sub-Committee further noted that the delegation of Brazil – in view of the decision of the Working Group not to agree to the safety zones as proposed by Brazil – concurred with maintaining the breadth of the safety zones as provided by UNCLOS. However, the Brazilian delegation requested that Member Governments include a recommendatory note in nautical publications that, if it was necessary for a ship to enter the area to be avoided, it was strongly recommended not to approach within one mile of fixed and semi-submersible platforms and offshore terminals and two miles of FPSOs and Dynamic Positioned platforms.

3.50 The Sub-Committee approved the proposed new Area to be Avoided “Off the Brazilian south-east coast, in the Campos Basin region” with corrections to the description, as referred to in paragraphs 3.48 to 3.49 above, as set out in annex ..., which the Committee is invited to adopt.

[[3.51 The Sub-Committee observed that the majority of the group had recommended that the Sub-Committee ask the Committee to establish as a high priority work item development of guidelines, principles and standards for how extension of safety zones larger than 500 metres, which is provided for in UNCLOS, can be evaluated. UNCLOS Article 60(5) provides, inter alia, 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.]]

[[3.52 The Sub-Committee also observed that the group had agreed to request the Sub-Committee to recommend the Committee to authorize a correspondence group to begin work to develop these guidelines, principles and standards immediately after MSC 83.]]

Amendment and expansion of the six existing Areas to be Avoided “In the Region of the North-West Hawaiian Islands”

3.53 The Sub-Committee noted that MEPC 56 had approved, in principle, the designation of the Papahānaumokuākea Marine National Monument as a Particularly Sensitive Sea Area that the final PSSA designation would only be taken after approval of the proposed associated protective measures by NAV 53 and adoption by MSC 83.

3.54 The Sub-Committee approved the proposed amendments to the six existing recommended Areas to be Avoided “In the Region of the North-West Hawaiian Islands” with some corrections to the description as set out in annex ..., which the Committee is invited to adopt.

Amendment to the Deep-water route leading to Europoort

3.55 The Sub-Committee approved the proposed amendment to the deep-water route leading to Europoort with some corrections to the description as set out in annex ..., which the Committee is invited to adopt.

Amendment to the Area to be Avoided “At Maas centre” and “At North Hinder junction Point”

3.56 The Sub-Committee approved the proposed amendments to the existing Area to be Avoided “At Maas centre” and “At North Hinder junction Point” with some corrections to the description as set out in annex ..., which the Committee is invited to adopt.

Recommendations on navigation to the Polish ports through the Gulf of Gdańsk traffic area

3.57 The Sub-Committee approved the proposed Recommendations on navigation to the Polish ports through the Gulf of Gdańsk traffic area with some corrections to the description as set out in annex ..., which the Committee is invited to adopt.

Establishment of new two-way route – Off the southwest coast of Iceland

3.58 The Sub-Committee approved the proposed new two-way route “off the southwest coast of Iceland” with some corrections to the description as set out in annex ..., which the Committee is invited to adopt.

Establishment of Areas to be Avoided – Off the south and southwest coast of Iceland

3.59 The Sub-Committee approved the proposed new Areas to be Avoided “off the south, southwest and west coast of Iceland” with some corrections to the description as set out in annex ..., which the Committee is invited to adopt.

Amendments to the Recommendation on navigation through the entrances to the Baltic Sea

3.60 The Sub-Committee approved the proposed amendments to the Recommendation on navigation through the entrances to the Baltic Sea as set out in annex ..., which the Committee is invited to adopt.

Establishment of new mandatory No Anchoring Areas on Sharks Bank and Long Shoal

3.61 The Sub-Committee approved the proposed new mandatory No Anchoring Areas “on Sharks Bank and Long Shoal” with some corrections to the description as set out in annex ..., which the Committee is invited to adopt.

Establishment of a seasonal Area to be Avoided “In Roseway Basin, South of Nova Scotia”

3.62 The Sub-Committee approved the proposed new recommended seasonal Area to be Avoided “In Roseway Basin, south of Nova Scotia” with some corrections to the description as set out in annex ..., which the Committee is invited to adopt.

Amendments to the northerly and southerly limits of the Sandettie Deep-Water route and an amendment to the position of the Foxtrot 3 station

3.63 The Sub-Committee approved the proposed amendments to Deep-Water route, and to the position of the Foxtrot 3 station “In the Strait of Dover and Adjacent Waters” with some corrections to the description as set out in annex ..., which the Committee is invited to adopt.

Amendments to the Recommendations on Navigation through the English Channel and the Dover Strait

3.64 The Sub-Committee approved the proposed amendments to the Recommendations on Navigation through the English Channel and the Dover Strait with some corrections to the description as set out in annex ..., which the Committee is invited to adopt.

Amendments to the Deep-Water Route “North-east of Gedser”

3.65 The Sub-Committee noted that the delegation of the Russian Federation had stressed that there was no information concerning under keel clearance for the deep-water route as indicated and requested the delegations of Denmark and Germany to clarify this issue. The delegation of Denmark stated that, in the view of Denmark and Germany, it was up to the master of the ship to decide what draught to use for safe navigation. When deciding so, the master should, among other things, consider the draught increasing, due to squat, the effect of heel during course alterations, the effect of sea level variations caused by tide and meteorological conditions, waves and swell, density of water including hogging and sagging of the ship.

3.66 The Sub-Committee further noted that the delegations of Denmark and Germany were of the view that common guidelines on this subject should be considered and that they would submit a detailed proposal to NAV 54.

3.67 The Sub-Committee approved the proposed amendments to the Deep-Water route “North-east of Gedser” as set out in annex ..., which the Committee is invited to adopt.

Implementation of new and amended traffic separation schemes and other routeing measures

3.68 New TSSs and amendments to the TSSs and other routeing measures mentioned in the above paragraphs will be implemented at 00.00 hours UTC 6 months after adoption by the Committee.

MANDATORY SHIP REPORTING SYSTEMS

New recommendatory/mandatory ship reporting system for the Papahānaumokuākea Marine National Monument

3.69 The Sub-Committee approved the proposed new ship reporting system for the Papahānaumokuākea Marine National Monument, with some corrections as set out in annex ..., which the Committee is invited to adopt.

New mandatory ship reporting system “On the approaches to the Polish ports in the Gulf of Gdańsk”

3.70 The Sub-Committee approved the proposed new mandatory ship reporting system “On the approaches to the Polish ports in the Gulf of Gdańsk” with some corrections as set out in annex ..., which the Committee is invited to adopt.

New mandatory ship reporting system “Off the south and southwest coast of Iceland”

3.71 The Sub-Committee approved the proposed new mandatory ship reporting system “Off the south and southwest coast of Iceland” with some corrections as set out in annex ..., which the Committee is invited to adopt.

Amendments to the existing mandatory ship reporting systems “Off Ushant”, “Off Les Casquets” and “Dover Strait/Pas de Calais”

3.72 The Sub-Committee approved the proposed amendments to the existing ship reporting system “Off Ushant”, “Off Les Casquets” and “Dover Strait/Pas de Calais” with some corrections as set out in annex ..., which the Committee is invited to adopt.

Any Other Business

3.73 The Sub-Committee noted that in specific circumstances it was important to use ship reporting systems provided for by SOLAS regulation V/11. There might be value in verbal contact with the mariner when a ship was entering or departing from a reporting area. AIS, although an important tool, was not always an appropriate substitute for voice to voice communications between a ship’s bridge and a shore-based authority (e.g., a VTS centre).

Accordingly, the Sub-Committee requested all Member Governments to reconsider and revise as necessary mandatory ship reporting systems so as to avoid duplication of information and reduce the items in the reporting format to those which are not available through AIS and other sources.

Implementation of Mandatory Ship Reporting Systems

3.74 The new and amended mandatory ship reporting systems mentioned in above paragraphs ... to ... will be implemented at 00.00 hours UTC six months after adoption by the Committee.]

4 REVIEW OF PERFORMANCE STANDARDS FOR INS AND IBS

4.1 The Sub-Committee observed that MSC 82, noting that the Sub-Committee, under its agenda item on “Review of performance standards for INS and IBS”, was developing revised INS and IBS performance standards to allow for a comprehensive application of SOLAS regulation V/15, had instructed NAV 53 to take ergonomic criteria, as set out in MSC-MEPC.7/Circ.3, into consideration when discussing this issue. Furthermore, the Committee had invited Member Governments and international organizations with human element expertise to participate during the deliberations at NAV 53 to ensure that the human element and, in particular, ergonomics were taken into account when reviewing the application of SOLAS regulations V/15 and V/23.

4.2 The Sub-Committee also observed that DE 50 had considered document DE 50/10/2/Rev.1 (IACS), containing a proposal for a draft revision of the Code on Alarms and Indicators and, noting that there was general agreement on the revised Code as proposed by IACS, and recalling that MSC 79 had instructed it to co-operate on this item with appropriate sub-committees, as necessary and when requested by the Sub-Committee, agreed to refer the draft revised Code (DE 50/10/2/Rev.1) to NAV 53, DSC 12, FP 52 and BLG 12 for comments on issues under these Sub-Committees’ purview.

4.3 The Sub-Committee recalled that NAV 50, with a view to progressing the matter further intersessionally, had established a correspondence group under the co-ordination of Germany to give preliminary consideration to the revision of the performance standards for INS and IBS and advise the Sub-Committee.

4.4 The Sub-Committee also recalled that NAV 51 had agreed with the conclusions of the correspondence group that work should begin with a revision of INS performance standards with a revision of the IBS performance standards following. The Sub-Committee had further agreed with the correspondence group that performance standards for a bridge alarm management system were also required but was of the opinion that they could form a part of INS performance standards. NAV 51, therefore, had agreed to the revised draft structure of performance standards for INS together with terms of reference for the re-established correspondence group to prepare the work for consideration at NAV 52.

4.5 The Sub-Committee further recalled that DE 49 had considered document DE 49/13 (Germany), advising on the progress made by the correspondence group on the revision of Integrated Navigation System (INS) and Integrated Bridge System (IBS) performance standards, and the development of performance standards for bridge alarm management system, established by NAV 51, which had also been instructed to liaise with the DE Sub-Committee to ensure consistent treatment of alarm management when reviewing the Code on Alarms and Indicators; and document DE 49/13/1 (United Kingdom), supporting the proposals in document DE 49/13 to classify alarms on the basis of the urgency of the required response and suggesting common definitions between the INS activity and the revision of the Code and the inclusion of some aspects of alarms that are outside the scope of performance standards which are under development by the Sub-Committee. Following a brief discussion, DE 49 had invited Member Governments and international organizations to submit to DE 50 (5-9 March 2007), proposals for amendments to the Code on Alarms and Indicators, taking into account the outcome of NAV 52's consideration.

4.6 The Sub-Committee recalled that, NAV 52 had agreed with the conclusions of the Group that more work was required in section 3 (Application), in section 15 (Provision of on-board familiarization material) where guidance and requirements should be clearly differentiated and in Appendix 1 (Definitions) where a definition for Human Machine Interface should be added. The Sub-Committee further recalled that the correspondence group had indicated the need for more work in several areas.

4.7 The Sub-Committee also recalled that, NAV 52 had further agreed with the conclusion of the correspondence group's opinion that a revision of the performance standards for IBS should include the development of bridge resource management guidelines and be conducted in the

framework of SOLAS regulation V/15 and that Appendix 3 of NAV 52/4 was a suitable base text. Further, the Sub-Committee had agreed that a proposal for a modular concept of INS and future revised individual performance standards should be developed further.

4.8 The Sub-Committee briefly discussed the report by Germany (NAV 53/4), summarizing the work and recommendations of the Correspondence Group regarding the revision of the performance standards for INS and IBS. A draft proposal for INS performance standards including an alarm management module as well as draft guidelines on the application of SOLAS regulation V/15 to INS and IBS had been prepared.

4.9 The Sub-Committee also briefly discussed document NAV 53/4/1 (Norway), providing general comments on the report of the Correspondence Group and information on experience gained from voice guiding alarms as tested on two Norwegian ro-ro passenger ships.

4.10 The Sub-Committee noted the information provided in documents NAV 53/INF.4, NAV 53/INF.5 and NAV 53/INF.6 (IACS) on IACS recommendations for the application of SOLAS regulation V/15.

4.11 The Sub-Committee noted that the Correspondence Group had prepared draft revised performance standards for INS, whilst recommending that for IBS it would be more appropriate to develop Guidelines rather than performance standards.

4.12 The observer from IACS informed the Sub-Committee that instead of a Unified Interpretation, IACS had now developed Recommendation on the application of SOLAS regulation V/15 relating to bridge design, design and arrangement of navigational systems and equipment and bridge procedures.

4.13 After a brief discussion, the Sub-Committee agreed that the INS performance standards should be stand alone and there should be no restriction on the application of the standard to all ships.

4.14 The Sub-Committee agreed, to refer documents NAV 53/4, NAV 53/4/1, NAV 53/INF.4, NAV 53/INF.5 and NAV 53/INF.6 to the Technical Working Group to be established under

agenda items 4, 7, 9, 11, 18 and 21 (sub-item on revised ECDIS Performance Standards) for consideration and advice.

Establishing Technical Working Group

4.15 Having also considered agenda items 7, 9, 11, 18 and 21 (sub-item on revised ECDIS Performance Standards), which were deemed to be within the remit of the Technical Working Group, the Sub-Committee re-established the Technical Working Group and instructed it to consider all relevant documents submitted under agenda items 4, 7, 9, 11 and 21 (sub-item on revised ECDIS Performance Standards) and, taking into account any decisions of, and comments and proposals made in Plenary, undertake the following tasks:

- .1 consider NAV 53/4 and, taking into account the framework for the consideration of ergonomics and the working environment in order to reduce the incidents of personal injuries and human errors (MSC-MEPC.7/Circ.3):
 - .1 finalize the draft INS performance standards (NAV 53/4, annex 1);
 - .2 finalize the draft Guidelines on the application of SOLAS regulation V/15 to INS, IBS and bridge design taking into the account the need for verifying compliance (NAV 53/4, paragraph 12, annex 2) (agenda item 4);
 - .3 review and develop further the draft outline of an SN circular (NAV 53/4, paragraph 13, annex 3) for the modular concept for future performance standards (agenda item 4);
 - .4 provide guidance and comments on the need to establish standard serial communication protocol to support compatibility and to allow interconnection and integration for the successful implementation of INS and IBS (NAV 53/4, paragraph 6) (agenda item 4); and
 - .5 provide recommendations and guidance as to the appropriate instrument for the revised IBS performance standards i.e. whether they should be re-drafted as performance standards or as guidelines (NAV 53/4, paragraphs 7 and 8) (agenda item 4);

- .2 provide proper justification for an extension of this agenda item for another two sessions to finalize the performance standards for IBS and also prepare the revised terms of reference for the Correspondence Group on IBS issues to progress work for finalization at NAV 55 (agenda item 4);
- .3 consider document DE 50/10/2/Rev.1 (IACS), containing a proposal for a draft revision of the Code on Alarms and Indicators and provide comments relating to alarms, including alarm management on the bridge (agenda item 4);
- .4 consider document NAV 53/7 and finalize a draft SN circular on Guidelines for the installation of shipborne radar equipment;
- .5 prepare, as appropriate, recommendations, opinions and liaison statements to appropriate ITU bodies in relation to document NAV 53/9/1;
- .6 finalize a draft MSC circular on Safety margins to protect radar systems (NAV 53/9/2, annex);
- .7 consider document NAV 53/11 and NAV 53/18, taking into account IACS clarification on IACS Unified Interpretations of COLREG 2 and finalize the draft performance standards for navigation lights, navigation light controllers and associated equipment;
- .8 review resolution MSC.232(82) on Adoption of the revised performance standards for electronic chart display and information systems (ECDIS) and assess whether a common layout of controls; names or symbols for controls; and output on the display for each control could be appropriately included therein and provide relevant guidance and recommendations, as appropriate;
- .9 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

.10 submit a report to Plenary on Thursday, 26 July 2007 for consideration at Plenary.

Report of the Technical Working Group

[4.16 Having received and considered the Technical Working Group report (NAV 53/WP.2), the Sub-Committee (with reference to paragraphs 3.1 to 3.11 and annexes 1, 2 and 3), took action as summarized hereunder.]

[4.17 The Sub-Committee noted that these proposed draft performance standards only address the larger integrated systems conforming to the INS definition in this new standard and they did not apply to smaller integrated systems, such as ECDIS integrated with track control. The Sub-Committee approved the draft MSC resolution on performance standards for Integrated Navigation Systems as set out in annex ... for submission to the Committee for adoption.

4.18 The Sub-Committee noted that the Group had considered the proposed draft Guidelines on the application of SOLAS regulation V/15 to INS, IBS and bridge design and agreed that the guidelines should be made available for designers and system integrators on the one hand and for the development of performance standards on the other hand. To support their application the Group recommended that the guidelines be made available by means of an SN circular. The Sub-Committee agreed that the guidelines should not be attached as appendices to the revised performance standards for INS and IBS, because performance standards have a more prescriptive nature than guidelines.

4.19 The Sub-Committee also noted that the Group had discussed the need for possible means for flag States to verify compliance with the Guidelines and observed that the IACS recommendations (documents NAV 53/INF.4, NAV 53/INF.5 and NAV 53/INF.6) provide a way of verifying compliance with aspects of SOLAS V/15.

4.20 The Sub-Committee agreed the draft SN circular on Guidelines on the application of SOLAS regulation V/15 to INS, IBS and bridge design, as set out in annex ... with a view to approval by the Committee.

4.21 The Sub-Committee further agreed the draft outline of an SN circular for the application of the modular concept for future performance standards, as set out in annex ...

The Sub-Committee agreed to instruct the Correspondence Group to be established to progress the work and invited Member Governments and international organizations to submit comments and proposals for discussion at NAV 54.

4.22 The Sub-Committee concurred with the view of the Group that, for the successful implementation of INS and IBS, it was essential that all sensors and equipment adopt a standard serial communication protocol to support compatibility and allow interconnection and integration. The Sub-Committee agreed to invite IEC to further develop suitable interface standards on INS and IBS and closely liaise with the Organization on this matter.

4.23 Regarding the revision of the IBS performance standards, the Sub-Committee noted the view of the Group that the existing IBS performance standards were impractical to apply and enforce. Although there was some support for further performance standards, the Group had concluded that guidelines would be more appropriate for IBS and that some parts of the items which were identified as essential for an IBS document could have a broader range of application and could be made applicable for bridge design in general. In particular, the Sub-Committee agreed with the views of the Group that the matter of “bridge alert management” needed to be developed as performance standards and that for all other IBS issues guidelines were appropriate.

4.24 The Sub-Committee also agreed that there was a need for extension of the target completion date of this work programme item to 2009 and that the title should be changed to “Development of guidelines for IBS, including performance standards for Bridge Alert Management”. The Sub-Committee noted that justification was given by the fact that the review of the INS performance standards had absorbed all the time of the Correspondence Group up to this session and that the development of a new IBS document was a very complex matter. Further work was also needed on the development of guidance on the application of the modular concept for future performance standards. The Sub-Committee endorsed the extension of the work programme item and the change of the title for submission to the Committee for approval.

4.25 The Sub-Committee agreed with the Group's recommendation to re-establish an intersessional Correspondence Group on IBS under the leadership of Germany* with the following terms of reference:

- .1 develop guidelines for IBS, including performance standards for Bridge Alert Management, taking into account the need to support the comprehensive application of SOLAS V/15;
- .2 develop proposals for further development of a SN circular for the application of the modular concept for future performance standards;
- .3 continue liaison with the Sub-Committee on Ship Design and Equipment (DE) to ensure consistent treatment of alerts, including alarms and indicators; and
- .4 submit its report to NAV 54 for consideration.

4.26 The Sub-Committee agreed to instruct the Correspondence Group to continue liaison with the DE Sub-Committee to ensure consistent treatment of alerts, including alarms and indicators (DE 50/10/2/Rev.1).]

5 EVALUATION OF THE USE OF ECDIS AND ENC DEVELOPMENT

5.1 The Sub-Committee recalled that NAV 50 had welcomed the offer from the observer of IHO to evaluate, together with its members if, and to what extent, coastal waters were adequately covered by RNC in relation to safety of navigation, and also decided to request IHO to evaluate the extent of world-wide ENC coverage and present the outcome of that evaluation to NAV 51.

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5.2 The Sub-Committee also recalled that NAV 51 had appreciated and expressed support for the IHO initiative to establish a comprehensive online catalogue of available official charts, which would facilitate the determination of “appropriate folio of up-to-date paper charts”. It had further endorsed the view of the Working Group that Member States should be invited to consider which paper charts would meet the “appropriate folio of up-to-date paper charts” criteria in territorial seas and where ENC’s did not exist, and communicate this information to the IHO for inclusion in its online chart catalogue. In considering what waters the coastal State should cover when advising an “appropriate folio of up-to-date paper charts”, NAV 51 was of the view that this was only relevant in territorial seas not covered by ENC’s and transiting ships should seek the advice of the coastal State.

5.3 The Sub-Committee further recalled that, NAV 52 had considered the information in document NAV 52/6/1 and an associated presentation by IHO on the development of a comprehensive online catalogue of available official charts. The presentation had demonstrated a possible prototype of the catalogue which would provide information as to the availability of chart coverage in an as clear and simple manner as possible. The catalogue was primarily aimed at ENC’s and RNC’s would be shown where ENC’s were not available. The Sub-Committee was informed by IHO that there had been an increase in the production of ENC’s worldwide. The Sub-Committee had concurred with the view expressed by IHO that with the possibility of mandatory carriage requirements for ECDIS, the production would increase further. The Sub-Committee had requested IHO to provide more detailed information to NAV 53. After in-depth discussion, NAV 52 had agreed that the proposed structure of the online catalogue should include the following:

- .1 ENC’s;
- .2 RNC where ENC’s are not available;
- .3 coastal States’ recommendation on appropriate folio of up-to-date paper charts for areas where ECDIS is operated on RCDS mode; and
- .4 index of all globally available paper charts.

Revision of SN/Circ.207 (pending issue from NAV 52)

5.4 The Sub-Committee observed that NAV 51 had considered the need to review SN/Circ.207 to ensure consistency with the proposed clarifications for “an appropriate folio of up-to-date paper charts” and was of the view that while a review of the circular was necessary to

update it in the light of experience gained, it would be premature to revise it at present in view of the revision of the Performance Standards of ECDIS as from NAV 52.

5.5 The Sub-Committee recalled that, NAV 52, using the information provided in document NAV 52/6 (Australia), had prepared a draft revised SN/Circ.207 on the differences between RCDS and ECDIS with a view to approval, after the finalization of the revised performance standards for ECDIS at NAV 53. NAV 52 had also agreed that, in order to approve this circular after the finalization of the revised performance standards for ECDIS at NAV 53, it was necessary to extend the target completion date for this item. Accordingly, the Committee was invited to extend the target completion date to 2007.

5.6 The Sub-Committee also recalled that, NAV 52 had further recognized that document NAV 52/WP.3 (Report of the Working Group on Evaluation of the use of ECDIS and ENC development) had been considered before document NAV 52/WP.4/Add.1 (Report of the Technical Working Group relating to amendments to the ECDIS performance standards). Accordingly, the Sub-Committee had noted the preparation of the draft revised SN/Circ.207 on the difference between RCDS and ECDIS with a view to approval after the finalization of the revised performance standards for ECDIS at NAV 53. However, after consideration of document NAV 52/WP.4/Add.1, the Sub-Committee had subsequently approved the draft MSC resolution on Adoption of the revised ECDIS performance standards with a view to adoption by MSC 82 (NAV 52/18, paragraph 5.8 refers). Hence, the conditions for approving the draft revised SN/Circ.207 at NAV 53 had been already met.

5.7 The Sub-Committee considered document NAV 52/WP.3, annex relating to the draft revised SN/Circ.207 on Differences between RCDS and ECDIS and agreed to the draft revised SN/Circ.207, and set out in annex ..., for submission to MSC 83 for approval.

Maintenance of ECDIS software

5.8 The Sub-Committee considered document NAV 53/5 (IHO), proposing that consideration should be given to issuing an SN circular regarding the maintenance of ECDIS software.

5.9 The Sub-Committee considered document NAV 53/5/3 (United Kingdom) endorsing the above proposal by the IHO. However, the United Kingdom was also of the opinion that there might be a wider issue concerning software updating of a range of processor-based navigation and radio communications equipment which needed to be addressed.

5.10 The Sub-Committee also considered document NAV 53/5/4 (Australia) endorsing the IHO proposal and stating further that there might be a wider issue concerning the maintenance of software for a range of computer-based shipboard equipment that needed to be addressed.

5.11 The Sub-Committee noted that Australia and the United Kingdom (MSC 83/25/7) had also submitted a new work programme proposal on the afore-mentioned wider issue of maintenance of software for processor-based navigation and radiocommunications equipment to MSC 83.

5.12 The Sub-Committee was of the opinion that this was a real practical and operational issue that needed to be addressed on an urgent basis.

5.13 There was considerable support for the IHO proposal for the issuance of an SN circular regarding the maintenance of ECDIS software.

5.14 The Sub-Committee having considered document NAV 53/WP.6, annex, agreed the draft SN circular on the Maintenance of ECDIS software, as set out in annex ..., for submission to MSC 84 for approval.

Development of a comprehensive online catalogue of available official charts

5.15 The Sub-Committee considered document NAV 53/5/1 (IHO) providing updated information on the development of the IHO online catalogue of ENC's, RNC's and coastal States recommendations for the "appropriate portfolio of up-to-date paper charts" to be carried as backup.

5.16 The delegation of the Russian Federation was of the opinion that responses of coastal States to the IHO letter and IMO Circular letter No.2773 must differentiate between the "appropriate portfolio of up-to-date paper charts" used in conjunction with ECDIS operated in RCDS mode, and "appropriate portfolio of up-to-date paper charts" as back up to a single ECDIS.

5.17 The delegation of Russian Federation further noted the importance of the global index of official paper charts in the world wide catalogue, as it had been originally planned by the IHO, and invited IHO to continue consideration of possible solutions in order to collect and maintain this data within the IHO catalogue.

Evaluation of Electronic Navigational Chart (ENC) availability

5.18 The Sub-Committee considered document NAV 53/5/2 (IHO) providing updated information on the availability of ENCs. The figures provided showed that ENC coverage was increasing steadily and it was the opinion of the IHO that there would be adequate coverage of consistent ENCs by the time any further mandatory carriage requirements were likely to be adopted by IMO.

5.19 The Sub-Committee noted with appreciation the information provided by IHO and requested it to update the Sub-Committee on further progress at NAV 54. The Sub-Committee was also of the opinion that the availability of ENCs worldwide was most important and requested IHO and Member Governments to continue their efforts in increasing the coverage of ENCs.

5.20 The delegation of Singapore stated that on 12 June 2007, Singapore and Indonesia Hydrographic Offices had signed an MOU on joint administration of ENCs covering ferry routes and terminals between Singapore and Rian Islands, Indonesia. The ENCs were jointly produced, quality assured and ECDIS sea trialled by both the Hydrographic Offices. The joint project was initiated in 2003 to further enhance the safety of navigation onboard ferries (High Speed Craft) and in anticipation of mandatory ECDIS carriage requirements. The ENCs would be commercially distributed through appointed distributors.

5.21 The delegation of the United Kingdom was of the view that seamless and consistent coverage of ENCs of major routes and ports at a reasonable cost was a prerequisite for the implementation of any carriage requirement for ECDIS. The United Kingdom therefore welcomed the positive information provided by the IHO on increasing coverage and noted IHO's commitment to achieve "adequate coverage, availability, consistency and quality of ENCs by 2010". The cost to industry was a factor that had to be taken into account when considering the implementation of any new carriage requirement. At present the cost of an ENC could be some three to four times that of the equivalent paper chart and the United Kingdom was aware that this had generated adverse comment from ship operators. The original Formal Safety Assessment on ECDIS presented to MSC 81 had included an assumption that there would be no difference between the cost of paper charts and ENCs. This was an issue that should be addressed by the IHO. The task facing the IHO was large and complex. There were many coastal States that did not have a hydrographic capability to produce the required ENCs and even where such a

capability existed, there was not necessarily the resources to ensure that standards of quality and consistency were quickly met. Additional resources were needed in many areas to update the surveys of critical areas to ensure that ENC's met the highest safety standards. There was no short term solution to this and in the interim one would have to accept that in many areas of the world the ENC would be a reflection of the existing paper chart. It was very encouraging to see IHO responding to this extremely significant challenge. There are already around two thousand vessels currently using ECDIS with ENC's. The more quickly IHO was able to influence the provision of adequate and consistent ENC coverage, the better this would be for safe and efficient navigation through the use of ECDIS. The United Kingdom concluded by stating that it was fully committed to supporting the IHO in its task.

5.22 The observer from IHO thanked the Sub-Committee for the supportive comments and confirmed that ECDIS production was increasing; IHO would provide support to its members, and IHO was committed to ensuring world-wide ENC coverage.

5.23 The Committee was invited to delete the item "Evaluation of the use of ECDIS and ENC development" from the Sub-Committee's work programme since work on this item had been completed.

6 CARRIAGE REQUIREMENTS FOR A BRIDGE NAVIGATIONAL WATCH ALARM SYSTEM

6.1 The Sub-Committee recalled that MSC 81 had considered document MSC 81/23/2 (Bahamas and Denmark), proposing to amend the 1974 SOLAS Convention to require that all ships of 150 gross tonnage and upwards and passenger ships irrespective of size shall be fitted with a Bridge Navigational Watch Alarm System (BNWAS), to be in operation when the ship was at sea, with a view to enhancing the safety of navigation, taking into account the human element. Whilst the Performance standards for a bridge navigational watch alarm system was adopted by resolution MSC.128(75), no carriage requirements or guidelines for the use of such systems had been adopted yet. Following consideration, the Committee decided to include, in the Sub-Committee's work programme and the provisional agenda for NAV 53, a high priority item on "Carriage requirements for a bridge navigational watch alarm system", with a target completion date of 2008, and instructed NAV 52 to give preliminary consideration to the matter.

6.2 The Sub-Committee also recalled that NAV 52 had considered, on a preliminary basis, document MSC 81/23/2 (Bahamas and Denmark), containing the proposed draft amendment to

SOLAS regulation V/19.2.2 (MSC 81/23/2, annex), and was of the opinion that further consideration was necessary. Members were invited to submit suitable proposals and comments for consideration at NAV 53.

6.3 The Sub-Committee considered document NAV 53/6 (Denmark), proposing an amendment to SOLAS regulation V/19 to require all ships of 150 gross tonnage and upwards and passenger ships irrespective of size to be fitted with a BNWAS, which should be in operation when the ship is at sea.

6.4 The Sub-Committee took note of the statistical information and analysis on marine accidents due to dozing provided in document NAV 53/INF.8 (Japan).

6.5 A number of delegations spoke on the issue. There was substantial support for the proposal by Denmark to amend SOLAS regulation V/19 for a carriage requirement of a BNWAS. The majority of the delegations were of the view that installation of a BNWAS should not lead to a reduction in manning levels on the bridge of a ship and that text to this effect should be included in the preambular paragraphs of the adopting resolution. The equipment fitted should be sensor based.

6.6 The observer from ICS was of the opinion that further research was necessary before a final decision was taken to mandate a carriage requirement for BNWAS.

6.7 The observers from IFSMA and ITF whilst supporting the proposal in principle stated that concerns on fatigue should be reflected in the report. A number of delegations supported this opinion.

6.8 The Chairman in summing up the discussions that had taken place, observed that there was substantial support to amend SOLAS regulation V/19 for a carriage requirement of a BNWAS. It was evident that Members were clear in their mind that carriage of BNWAS should not lead to a reduction in manning levels on the bridge. The equipment for BNWAS should include sensor based technology and should not be seen as a solution for the problem of fatigue.

6.9 The delegation of Japan, supported by some delegations, expressed the view that the existing performance standards (resolution MSC.128(75)) would not be suitable for small ships

not exceeding 500 gross tonnage and for ships not engaged in international voyages and, therefore, modification to the existing performance standards could be considered when discussing the carriage requirement of BNWAS to those ships.

6.10 Taking into account the progress made, the Sub-Committee deferred further discussion to its next session. Member Governments were invited to submit suitable proposals and comments for consideration at NAV 54.

7 DEVELOPMENT OF GUIDELINES FOR THE INSTALLATION OF SHIPBORNE RADAR EQUIPMENT

7.1 The Sub-Committee noted that MSC 80 (MSC 80/24, paragraph 21.23) had considered document MSC 80/21/4 (Norway), proposing to develop guidelines on installation of shipborne radar equipment with the aim of ensuring the proper installation and setting-up of such equipment, which would contribute to ensuring that the performance of future radar installations on board ships would realize the maximum performance potential offered by the performance standards. Subsequently, MSC 80 decided to include, in the Sub-Committee's work programme, a high priority item on "Development of guidelines for the installation of shipborne radar equipment", with three sessions needed to complete the item and instructed it to include the item in the provisional agenda for NAV 52.

7.2 The Sub-Committee also noted that NAV 52 had considered document NAV 52/7 (Norway), providing a basic framework for developing draft Guidelines for the installation of shipborne radar equipment. The delegation of Norway had requested Members to provide suitable comments and guidance including suggestions on the draft guidelines for the installation of shipborne radar equipment detailed in document NAV 52/7. A number of delegations spoke on the issue. Some were of the view that special consideration should be given to on-site installation practices with respect to shipyards. Others were of the opinion that new radar installations on existing ships should be according to the proposed Guidelines, as far as practicable, and from the operational aspect, the radar antenna should preferably be sited on the centre-line of the ship. Accordingly, the Sub-Committee had invited Members to submit comments and suitable proposals for consideration at NAV 53.

7.3 The Sub-Committee considered document NAV 53/7 (Germany) containing a consolidated version of the draft Guidelines for the installation of shipborne Radar Equipment.

7.4 The Sub-Committee was of the opinion that the guidance developed in section 6.1 relating to interference of other antennas needed more elaboration.

7.5 The Sub-Committee agreed to refer document NAV 53/7 to the Technical Working Group to be established under agenda items 4, 7, 9, 11, 18 and 21 (sub-item on revised performance standards for ECDIS).

Report of the Technical Working Group

[7.6 Having received and considered the Technical Working Group's report (NAV 53/WP.2), the Sub-Committee (with reference to paragraph 4.1 and annex 4), took action as summarized hereunder.]

7.7 The Sub-Committee agreed a draft SN circular on Guidelines for the installation of shipborne radar equipment as set out in annex ... for submission to the Committee for approval.

[7.8 The Committee was invited to delete the item "Development of guidelines for the installation of shipborne radar equipment", from the Sub-Committee's work programme, as the work on this item had been completed.]

8 AMENDMENTS TO COLREGs ANNEX I RELATED TO COLOUR SPECIFICATION OF LIGHTS

8.1 The Sub-Committee recalled that MSC 80 (MSC 80/24, paragraph 21.24.1), based on a proposal by Norway (MSC 80/21/8), had agreed to add a high priority work item on "Revision of Annex I of the Convention on the International Regulations for Preventing Collisions at Sea, 1972, (COLREG) to the work programme of the Sub-Committee, with two sessions needed to complete the work. The colour specification of lights given in Annex I of COLREG had been revised by the International Commission on Illumination; the reference in the Annex I of COLREG was therefore no longer valid, and should be updated in accordance with the newest revised standard.

8.2 The Sub-Committee recalled also that NAV 52 had briefly considered the Norwegian proposal (NAV 52/8). The delegation of the Netherlands had stated that the use of established industrial standards, wherever possible, specifically those emanating from international standardization bodies, should be pursued by the Organization and its Members. According to the Netherlands, Norway had proposed the revision of the standards, as revised by the International Commission on Illumination, however, the reasons behind the revision had not been elaborated on and neither had Norway clarified the consequences of the proposed changes to

section 7 (Colour specification of lights) of Annex I of the COLREGs. The change in the colour temperature range of lights had been initiated by the wish to make use of LED systems in navigation lights. This had led to a shift in the chromaticity of white light towards the blue. This might not seem very problematic; however, it presented a severe problem for the present range of navigation lights in use, in storage and in production. It was not only the shift of the white light to the blue that was creating the problem but the elimination of part of the colour temperature range of the white light, as it was specifically this part of the range that was covered by present white navigation lights. Research by a leading navigation light manufacturer in the Netherlands, carried out in co-operation with the German Bundesamt für Seeschifffahrt und Hydrografie, had shown that approximately 90% of all white navigation lights either in use or produced did not meet the new colour temperature standard. Annex I of the COLREG was clear in itself: it stated that “the colour temperature of navigation lights shall conform to the co-ordinates given”. This would mean that approximately 90% of all white navigation lights would have to be replaced at an enormous cost to the industry. The Netherlands for that reason and without the safety benefits having been demonstrated by way of an FSA study, could not accept the Norwegian proposal.

8.3 The Sub-Committee recalled further that at NAV 52, a number of delegations had supported the views expressed by the Netherlands, including the need for a FSA study and a Cost Benefit Analysis. Accordingly, the Sub-Committee had requested Norway to re-consider their proposal and submit a revised document to NAV 53. Norway agreed to the request, however, also pointed out that COLREG would have to be amended because the present text was incorrect as a consequence of the revision of the relevant standards as decided by the International Commission on Illumination.

8.4 The Sub-Committee noted that no new document or proposal had been submitted to this session.

8.5 The delegation of Norway apologized that it had not been able to submit any document to this session as indicated at NAV 52. Norway, however retained its position that COLREG’s annex 1 related to colour specification of lights needed to be amended. The current situation was that COLREG Annex 1, section 7 stated that the standards specified in COLREG lay within the boundaries of the area of the diagram specified for each colour by the International Commission on Illumination (CIE). As CIE had amended their diagrams, this was no longer the case and the x and y co-ordinates specified in COLREG did not any longer coincide with the co-ordinates

specified by the CIE. Amending the COLREG was therefore a kind of housekeeping that in Norway's view needed to be done. However, it was recognized that the housekeeping had some consequences. The Norwegian delegation therefore proposed that the Sub-Committee requested the Maritime Safety Committee for an extension of the target completion date of this item to 2008. Accordingly, Norway would submit a proposal to the next session and try to make the submission as early as possible to give the Sub-Committee ample time to study the proposal.

8.6 The Sub-Committee invited Member Governments and NGOs to submit comments and suitable proposals for consideration at NAV 54.

8.7 Accordingly, the Committee was invited to extend the target completion date of this agenda item to 2008.

9 ITU MATTERS, INCLUDING RADIOCOMMUNICATIONS ITU-R STUDY GROUP 8 MATTERS

9.1 The Sub-Committee noted that NAV 52 had considered the issue of maintenance and administration of AIS binary messages, which had been transferred from IALA to IMO. ITU WP 8B had noted that SN/Circ.236 conflicted with Recommendation ITU-R M.1371-1, which included a set of international application identifier (IAI) definitions. The most significant conflict was the duplication and renumbering of messages. This had raised concerns, mainly from equipment manufacturers. They were confused as to which document to follow (ITU or IMO). Consequentially, there was a need to modify the existing equipment on board vessels in order to apply SN/Circ.236. Accordingly, the Sub-Committee approved the draft Liaison Statement to ITU on Maintenance and Administration of AIS binary messages given in NAV 52/18, annex 7 and instructed the Secretariat to convey the statement to ITU for consideration by WP 8B in September 2006.

9.2 The Sub-Committee noted the information provided in document NAV 53/9 (Secretariat) on the revised version of Recommendation ITU-R M.1371-2 adopted by ITU-R Study Group 8 concerning the technical characteristics for AIS using time division multiple access in the VHF maritime mobile band.

9.3 The Sub-Committee considered document NAV 53/9/1 (Secretariat) relating to the draft revision of Recommendation ITU-R M.824-2 on Technical parameters of radar beacons (racons).

9.4 The Sub-Committee also considered document NAV 53/9/2 (United Kingdom) relating to the need in any band-sharing considerations, for a “safety margin” to allow for the additional protection for variations in performance from different radar operators, under various environmental and other conditions because all of the maritime trials reported in ITU-R were carried out using non-fluctuating simulated marine targets.

9.5 The Sub-Committee was of the opinion that it was prudent to issue a draft MSC circular on Safety margin to protect radar systems.

9.6 The Sub-Committee agreed to refer documents NAV 53/9/1 (Secretariat) and NAV 53/9/2 (United Kingdom) to the Technical Working Group for consideration and comments, as appropriate.

Report of the Technical Working Group

[9.7 Having received and considered the Technical Working Group’s report (NAV 53/WP.2), the Sub-Committee (with reference to paragraphs 5.1 and 5.2 and annex 5), took action as summarized hereunder.]

[9.8 The Sub-Committee noted document NAV 53/9 (Secretariat) containing a revised version of Recommendation ITU-R M.1371-2, which had been adopted by ITU-R Study Group 8 and brought to the attention of IMO. The Sub-Committee noted also document NAV 53/9/1 (Secretariat) containing the revised version of Recommendation ITU-R M.824-2, which had been adopted by ITU-R Study Group 8 and brought to the attention of IMO.

9.9 The Sub-Committee considered document NAV 53/9/2 (United Kingdom) concerning the need in any band-sharing considerations, for a “safety margin” to allow for the additional protection for variations in performance from different radar operators, under various environmental and other conditions. The Sub-Committee agreed that there was a need to bring this to the attention of the radio regulatory authorities and agreed a draft MSC circular on Safety margins to protect radar systems as set out in annex ... for submission to the Committee for approval.]

10 GUIDELINES ON THE CONTROL OF SHIPS IN AN EMERGENCY

10.1 The Sub-Committee recalled that MSC 81 had considered document MSC 81/23/4 (Bahamas), proposing to develop guidelines covering the responsibilities of all parties in a maritime emergency, which would not create a chain of command but, if implemented by Member States as part of their emergency action plans, would clarify what the chain should be. In the opinion of the Bahamas, the guidelines would not change the responsibilities of the master, but they might avoid misunderstandings as to what a master's role should be when coastal State laws would be enforced and what their effect would be on the master and others involved in an emergency. MSC 81 noted that, in commenting on the above proposal, IFSMA (MSC 81/23/22) had invited the Committee, to prepare clear and distinct guidelines in order to avoid misunderstanding as to where the responsibility lied in cases where the master was being ordered to take action against his own decision.

10.2 The Sub-Committee also recalled that, in the context of the above proposal, the delegation of the United Kingdom, referring to the **Sea Empress** incident, had informed MSC 81 of the SOSREP system which was developed to establish the command, control and communication procedures that were needed during maritime emergencies. The delegation also had advised that, since the establishment of the SOSREP system, then six years ago, it had been put into action on more than 600 occasions of which about 30 were considered as very significant and, therefore, the delegation was of the opinion that the development of appropriate guidelines would not be a single incident issue. In the course of the ensuing debate, a number of delegations, having referred to the information provided by the delegation of the United Kingdom, had advised MSC 81 of similar national systems and supported the idea that appropriate measures should be taken to regulate internationally the issue of co-operation among parties involved in maritime emergencies.

10.3 The Sub-Committee further recalled that, in view of this debate, MSC 81, having recognized the importance of the issue and that this matter should be addressed in a generic manner and not as a single incident issue, had decided to include, in the work programmes of the NAV and COMSAR Sub-Committees and the provisional agendas for NAV 53 and COMSAR 11, a high priority item on "Guidelines for the control of ships in an emergency", with a target completion date of 2007, and assigned the NAV Sub-Committee as a co-ordinator, instructing NAV 52 to give a preliminary consideration to the matter.

10.4 The Sub-Committee recalled that NAV 52 had considered document NAV 52/17/5 (Bahamas), suggesting the development of, and providing the framework for proposed generic guidelines on the control of ships in an emergency. There was considerable support for the Bahamas proposal to develop such guidelines. The Sub-Committee was also of the opinion that the International Salvage Union should be involved, since the proposed guidelines would include a section on Guidelines for salvors. The Sub-Committee, keeping in mind the close proximity of COMSAR 11 (February 2007) and the target completion date of 2007, agreed to instruct the Secretariat to forward document NAV 52/17/5 to COMSAR 11 together with the Sub-Committee's comments thereon for that Sub-Committee's review and comments. Members were invited to submit suitable proposals and comments for consideration at COMSAR 11 and NAV 53.

10.5 The Sub-Committee noted that COMSAR 11 had instructed the SAR Working Group to consider document NAV 52/17/5 and to further develop draft guidelines on the control of ships in an emergency for consideration at Plenary. COMSAR 11 noted that comments had been provided only on the areas applicable to SAR. Editorial comments were provided for chapters 1 to 4 only, as other chapters would require advice from other experts. Accordingly, COMSAR 11 had revised the draft guidelines on the control of ships in an emergency (COMSAR 11/18, annex 16) and instructed the Secretariat to forward them to NAV 53 for further consideration and invited the Committee to endorse this action.

10.6 The Sub-Committee considered document NAV 53/10 (Bahamas and ISU), providing a complete draft text of the proposed generic guidelines on the control of ships in an emergency.

10.7 A number of delegations spoke on the issue and supported the development of the draft guidelines. The Sub-Committee agreed with the advice provided by the Legal Division of the Secretariat that in the draft guidelines a reference should be made to Article 221 of UNCLOS rather than the reference to the Intervention Convention. Some delegations expressed concerns regarding the delimitations of search and rescue issues including the need to clarify the text in sections on Guidelines for coastal state, master and salvors. The Sub-Committee therefore agreed that some redrafting of the guidelines was needed.

10.8 The Chairman, in his summing up, stated that there had been large support for the proposal. However, he was of the view that, in total, it was necessary to undertake some further work in plenary and then to entrust the task of redrafting to a Drafting Group.

10.9 Subsequently, the guidelines were discussed in detail, and the Sub-Committee agreed to amend the various sections of the Guidelines based on the comments and proposals made in plenary. The main elements of the agreed amendments were related to section 5 on Guidelines for coastal State, section 6 on Guidelines for Master and section 7 on Guidelines for salvors.

Establishing the Drafting Group on Guidelines on the control of ships in an emergency

10.10 The Sub-Committee further agreed to establish a Drafting Group on Guidelines on the control of ships in an emergency and to refer document NAV 53/10 for its consideration. The Drafting Group was instructed to:

- .1 prepare a draft MSC circular on Guidelines on the control of ships in an emergency based on document NAV 53/10 (Bahamas and the ISU), taking into account any decisions of, and comments and proposals made in Plenary; and
- .2 submit a report to Plenary on Thursday, 26 July 2007 for consideration at Plenary.

Report of the Drafting Group on Guidelines on the control of Ships in an emergency

10.11 Having received and considered the report of the Drafting Group (NAV 53/WP.5), the Sub-Committee (with reference to paragraph 4.1), took action as summarized hereunder.

10.12 The Sub-Committee agreed to the draft MSC circular on Guidelines on the control of ships in an emergency, as set out in annex for submission to MSC 83 for approval.

10.13 The Committee was invited to delete the item “Guidelines on the control of ships in an emergency”, from the Sub-Committee’s work programme, as the work on this item had been completed.

11 DEVELOPMENT OF PERFORMANCE STANDARDS FOR NAVIGATION LIGHTS, NAVIGATION LIGHT CONTROLLERS AND ASSOCIATED EQUIPMENT

11.1 The Sub-Committee recalled that MSC 80 (MSC 80/24, paragraph 21.24.2), based on a proposal by Norway (MSC 80/21/8), had agreed to add a high priority work item on “Development of Performance Standards for Navigation Lights, Navigation Light Controllers and associated equipment” to the work programme of the Sub-Committee, with two sessions to complete the work and include it in the provisional agenda for NAV 52.

11.2 The Sub-Committee also recalled that, at NAV 52, the Technical Working Group had started work on the development of such draft performance standards. NAV 52 had noted the views of the Group that the proposed requirement, to connect the information of the navigational lights to the AIS and VDR, should only apply to larger ships which had carriage requirements for this equipment. In addition, the proposed requirement for an alarm notifying the OOW that the output of LED lamps had reduced below the level required by the COLREG would involve the development of a suitable measuring sensor otherwise review of the proposed requirement would be necessary. Members were invited to submit comments and suitable proposals for consideration at NAV 53.

11.3 The Sub-Committee briefly discussed document NAV 53/11 (Japan) providing the draft performance standards for Navigation Lights, Navigation Light Controllers and associated equipment.

11.4 The delegations of Japan and the Russian Federation supported by some other delegations were of the view that document NAV 53/11 should be considered along with document NAV 53/18 by the Technical Working Group as the issues in both the documents were inter-related with regard to navigation lights; the Sub-Committee agreed with the suggestion.

11.5 The Sub-Committee also agreed to refer document NAV 53/11 to the Technical Working Group to be established under agenda items 4, 7, 9, 11, 18 and 21 (sub-item on revised performance standards for ECDIS).

Report of the Technical Working Group

[11.6 Having received and considered the Technical Working Group’s report (NAV 53/WP.2), the Sub-Committee (with reference to paragraph 6.1 and annex 6), took action as summarized hereunder.]

[11.7 The Sub-Committee recognized the need for standardized serial interface for the navigation lights controller to enable it to communicate with other marine navigation and communication systems and invited the IEC to develop a suitable interface. The Sub-Committee also approved the draft MSC resolution on Adoption of performance standards for navigation lights, navigation light controllers and associated equipment, as set out in annex ... for submission to the Committee for adoption.]

[11.8 The Committee was invited to delete the item “Development of performance standards for navigation lights, navigation light controllers and associated equipment”, from the Sub-Committee’s work programme, as the work on this item had been completed.]

12 WORLD-WIDE RADIONAVIGATION SYSTEM

12.1 The Sub-Committee recalled that NAV 52 had briefly discussed the relevant part of document NAV 52/10 (United States) relating to the approval of a draft liaison statement to IEC Technical Committee 80, Working Group 4A, to take into account the high electromagnetic environment in the development or revision of relevant standards, including IEC Standard 61108 – “Maritime navigation and radiocommunication equipment and standards – Global Navigation Satellite Systems (GNSS)”. The Sub-Committee had noted with interest the information provided by the Republic of Korea (NAV 52/INF.8) concerning communication techniques for high accuracy DGPS in the Republic of Korea.

12.2 The Sub-Committee also recalled that NAV 52 had agreed with the views of its Technical Working Group in regard to the results of commercial GPS antenna vulnerability tests to high power military radars, and that whilst the results of the tests presented showed some possible problems of damage to GPS antennas, the Sub-Committee was not aware of a widespread problem of this nature with civil use. Accordingly, the Sub-Committee did not consider that it had sufficient evidence of a problem and invited Members to submit more information to the next session. The Sub-Committee had agreed with the Group’s opinion that a liaison statement to IEC Technical Committee 80 was therefore not necessary at this stage.

12.3 The Sub-Committee further recalled that, at NAV 52, with respect to resolution A.915(22) concerning the IMO policy for GNSS and resolution A.953(23) concerning recognition of radionavigation systems as components of the WWRNS, there was agreement that no action needed to be taken at that session.

12.4 The Sub-Committee observed that no document had been submitted to this session on this agenda item.

12.5 The United States advised the Sub-Committee that it had received no new information on the subject of military radar interference with GNSS signals.

12.6 The Sub-Committee therefore agreed that there was no need to forward any liaison statement to IEC Technical Committee 80.

12.7 The United States further advised the Sub-Committee that it intended to resubmit DGPS for acceptance as a component of the world-wide radionavigation system (WWRNS). The United States was presently validating that the DGPS signal met the relevant performance standards over the required (3 year) period of time.

13 DEVELOPMENT OF AN E-NAVIGATION STRATEGY

13.1 The Sub-Committee recalled that MSC 81 had considered document MSC 81/23/10 (Japan, Marshall Islands, Netherlands, Norway, Singapore, United Kingdom and the United States) proposing to develop a broad strategic vision for incorporating the use of new technologies in a structured way and ensuring that their use was compliant with the various navigational communication technologies and services that were already available, with the aim of developing an overarching accurate, secure and cost-effective system with the potential to provide global coverage for ships of all sizes.

13.2 The Sub-Committee also recalled that following discussion, MSC 81 had decided to include, in the work programmes of the NAV and COMSAR Sub-Committees and the provisional agendas for NAV 53 and COMSAR 11, a high priority item on “Development of an e-navigation strategy”, with a target completion date of 2008, and assigned the NAV Sub-Committee as co-ordinator, instructing NAV 52 to give preliminary consideration to the matter. MSC 81 had also agreed that the two Sub-Committees should consider the issues with the aim of developing a strategic vision within their associated work programmes for taking this issue forward and to report to MSC 85, for it to develop the necessary policy direction for further progress of this important work.

13.3 The Sub-Committee further recalled that NAV 52 had considered documents MSC 81/23/10 (Japan, Marshall Islands, Netherlands, Norway, Singapore, United Kingdom and the United States) on the development of an e-navigation strategy and (NAV 52/17/4 (Japan) outlining Japan's approach to e-navigation and agreed, to progress the work for NAV 53, to establish an intersessional Correspondence Group under the co-ordination of the United Kingdom. It also instructed the Correspondence Group to submit a document to COMSAR 11, raising specific questions that should be addressed by COMSAR and prepare a comprehensive report for submission to NAV 53.

13.4 The Sub-Committee noted that COMSAR 11 had agreed that the user requirements should be clearly defined by the NAV Sub-Committee before the COMSAR Sub-Committee could review the technical improvements that might be required if GMDSS equipment was to be utilized as a data communication network for e-navigation; the development of e-navigation should be user-driven and not technology driven; there should be equipment performance standardization, including a standard mode of operation for shipboard equipment; and the software installed in operating systems should follow a formal change control process to ensure that all elements of the e-navigation system would operate efficiently. COMSAR 11 had also agreed that with respect to the potential components of the e-navigation strategy and proposed system architecture, issues connected with search and rescue, data communication links, and operation of the GMDSS were within its remit. COMSAR 11 had further agreed that the existing GMDSS infrastructure supported SAR services and communications; however, with respect to e-navigation, broadband communication on a global basis using satellite technology would be necessary.

13.5 The Sub-Committee also noted that COMSAR 11 had instructed the Secretariat to convey the aforementioned views and conclusions to the NAV Sub-Committee and the Co-ordinator of the Correspondence Group on e-navigation for future work and guidance.

13.6 The Sub-Committee also recalled the Secretary-General's remarks at the opening session of the Sub-Committee underlining the need to make progress on the development of an e-navigation strategy.

13.7 The Sub-Committee briefly discussed document NAV 53/13 (United Kingdom), report of the Correspondence Group outlining the agreed scope of e-navigation and the approach to developing a system architecture, presenting complementary "component" and "descriptive" models including the key issues to be addressed in a future work programme.

13.8 The Sub-Committee also considered the comments by ICS (NAV 53/13/6) on the report of the outcome of the Correspondence Group. The observer from ICS requested that apart from the issues outlined in paragraph 6 of their submission, the E-navigation Working Group, should bear in mind that possible operational and technical developments should not lead but only support the strategy development.

13.9 The Sub-Committee was of the view that the support for the proposed e-navigation strategy should be based on user requirements rather than a system architecture based on possible operational and technological developments. The Sub-Committee further concluded that it could only undertake a gap analysis after the user requirements had been identified, as not to risk negating and constraining the work yet to be done thereon by the Organization.

13.10 With respect to the proposal by the United Kingdom (NAV 53/13/2) that a back-up to GNSS would be required in the event of any failure in the equipment and suggesting that LORAN-C and, in particular eLORAN, would be able to provide that capability, the Sub-Committee was of the view that it would be premature to opt for any particular back-up arrangements for GNSS at this stage of the development. In this context the Sub-Committee also noted the information provided by IALA (NAV 53/13/5) on the necessary redundancy of position fixing systems.

13.11 Furthermore, the Sub-Committee agreed with COMSAR 11, that the e-navigation strategy should be user, rather than technology driven and was of the view that it was first necessary to identify and define the user requirements before considering any technology standards. The Sub-Committee also agreed that it was necessary to determine the present limits of the e-navigation strategy, recognizing that this strategy had to be updated as and when necessary, before embarking on the development of the system architecture.

13.12 The Sub-Committee also briefly discussed documents NAV 53/13/1 (Japan), NAV 53/13/3 (IALA) and NAV 53/13/4 (IALA).

Establishing the E-Navigation Working Group

13.13 After preliminary discussion, as reported in paragraphs 3.1 to 3.12 above, the Sub-Committee established the e-navigation Working Group and instructed it to consider all relevant documents submitted under agenda item 13 (NAV 53/13, NAV 53/13/1, NAV 53/13/2,

NAV 53/13/3, NAV 53/13/4, NAV 53/13/5 and NAV 53/13/6) including the outcome of COMSAR 11 and taking into account any decisions of, and comments and proposals made in Plenary, undertake the following tasks:

- .1 consider the report of the Correspondence Group (NAV 53/13) and, in particular:
 - .1 finalize at least provisionally the definition of e-navigation (NAV 53/13, paragraph 6 and NAV 53/13/3);
 - .2 finalize at least provisionally the core objectives of an integrated e-navigation strategy (NAV 53/13, paragraphs 8.1 to 8.15);
 - .3 provide comments and guidance on the migration from traditional aids to navigation (AtoN) to virtual e-navigation aids (NAV 53/13, paragraphs 9 to 10);
 - .4 provide comments and guidance on the proposed onboard, shore and communications elements of e-navigation (NAV 53/13, paragraph 11);
 - .5 provide comments and guidance on the three proposed e-navigation systems architectures in order to further develop such a structure (NAV 53/13, paragraphs 12 to 16 and annex 2);
 - .6 provide comments and guidance on the user requirements to further develop and define such requirements including the need for developing a standard mode (S-mode) for mariners (NAV 53/13, paragraphs 17 to 20); and
 - .7 provide comments and guidance on the preliminary gap analysis in order to assist further development of a gap analysis on the basis of user requirements (NAV 53/13, paragraphs 21 to 24, annex 3 and NAV 53/13/6); and
- .2 consider NAV 53/13/1 and provide comments and guidance on the identification of essential functions of e-navigation by marine accidents analysis;
- .3 consider NAV 53/13/2 and NAV 53/13/5 and provide comments and guidance on the issue of necessary redundancy of position fixing systems;

- .4 consider NAV 53/13/4 and provide comments and guidance on the introduction and use of AIS and as Aid to Navigation (AtoN);
- .5 prepare revised terms of reference for the Correspondence Group on e-navigation to progress work for finalization at NAV 54 (NAV 53/13, paragraphs 28 to 30);
- .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, 26 July 2007 for consideration at Plenary.

Report of the E-Navigation Working Group

[13.14 Having received and considered the e-navigation Working Group's report (NAV 53/WP.4), the Sub-Committee (with reference to paragraphs 3.1 to 7.3), took action as summarized hereunder.

13.15 The Sub-Committee noted that the correspondence group (CG) had agreed to adopt the definition developed by IALA's e-NAV Committee (NAV 53/13, paragraph 6 and NAV 53/13/3, paragraph 2) and provisionally finalized the following definition for e-navigation as a concept based on harmonization of marine navigation system and supporting shore services driven by users' needs:

“E-Navigation is the harmonized collection, integration, exchange, presentation and analysis of maritime information onboard and ashore by electronic means to enhance berth to berth navigation and related services, for safety and security at sea and protection of the marine environment.”

Core objectives of e-navigation

13.16 The Sub-Committee considered the core objectives identified by the CG (NAV 53/13, paragraphs 8.1 to 8.15) and provisionally agreed that the core objectives of an e-navigation concept using electronic data capture, communication, processing and presentation should:

- .1 facilitate safe and secure navigation of vessels having regard to hydrographic, meteorological and navigational information and risks;
- .2 facilitate vessel traffic observation and management from shore/coastal facilities, where appropriate;
- .3 facilitate communications, including data exchange, among ship to ship, ship to shore, shore to ship, shore to shore and other users;
- .4 provide opportunities for improving the efficiency of transport and logistics;
- .5 support the effective operation of contingency response, and search and rescue services;
- .6 demonstrate defined levels of accuracy, integrity and continuity appropriate to a safety-critical system;
- .7 integrate and present information onboard and ashore through a human interface which maximizes navigational safety benefits and minimizes any risks of confusion or misinterpretation on the part of the user;
- .8 integrate and present information onboard and ashore to manage the workload of the users, while also motivating and engaging the user and supporting decision-making;
- .9 incorporate training and familiarization requirements for the users throughout the development and implementation process;
- .10 facilitate global coverage, consistent standards and arrangements, and mutual compatibility and interoperability of equipment, systems, symbology and operational procedures, so as to avoid potential conflicts between users; and
- .11 be scalable, to facilitate use by all potential maritime users.

Key outcomes of e-navigation

13.17 The Sub-Committee considered the three key outcomes agreed by the CG (NAV 53/13, paragraph 11) focusing on the onboard, shore and communications elements of e-navigation:

.1 Onboard

navigation systems that benefit from the integration of own ship sensors, supporting information, a standard user interface, and a comprehensive system for managing guard zones and alerts. Core elements of such a system will include high integrity electronic positioning, electronic navigational charts (ENCs) and system functionality with analysis reducing human error, actively engaging the mariner in the process of navigation while preventing distraction and overburdening;

.2 Ashore

the management of vessel traffic and related services from ashore enhanced through better provision, co-ordination, and exchange of comprehensive data in formats that will be more easily understood and utilized by shore-based operators in support of vessel safety and efficiency; and

.3 Communications

an infrastructure providing authorized seamless information transfer onboard ship, between ships, between ship and shore and between shore authorities and other parties with many related benefits, including a reduction of single person error.

13.18 In this context, the Sub-Committee agreed that these were broad expectations rather than outcomes and should be taken into account by the CG as a starting point, when developing the users' requirements.

System architecture

13.19 The Sub-Committee considered the three proposed e-navigation architectures developed by the CG (NAV 53/13, paragraphs 12 to 16 and annex 2) and noted that COMSAR 11 had not opted to formally favour any particular one, but stressed the importance of basing the vision and system architecture on agreed users' requirements. The Sub-Committee agreed that it was premature to agree on any one of the system architectures proposed by the CG before finalizing

the users' requirements and that the system architecture should only be considered after MSC 85 had agreed upon the policy direction based on the strategic vision finalized by NAV 54.

User requirements

13.20 The Sub-Committee considered the views of the CG on the users' requirements to further develop and define such requirements including the need for developing a standard mode for mariners (NAV 53/13, paragraphs 17 to 20) and noted that an e-navigation system should reduce some of the basic errors in perception, communication and decision-making that occurs on board and ashore. The Sub-Committee agreed that the E-Navigation strategy should be user driven rather than technology driven. In this context, the Sub-Committee was advised that the United Kingdom, IALA and IFSMA were working on developing a methodology to identify users and their needs and, would be providing the appropriate input to the CG. Accordingly, the Sub-Committee further agreed that the CG should continue its work related to identification of users and their needs.

13.21 The Sub-Committee noted the information provided by IFSMA on the project being undertaken by the Nautical Institute, titled 'S-mode'. The project was aimed at developing a standard presentation of information using a standard menu system for shipboard units. The Sub-Committee welcomed this initiative and invited IFSMA to keep the CG informed of their progress on the project. The Sub-Committee noted the recommendations of COMSAR 11 and agreed that pending further development, it would be premature at this stage to endorse a standard mode (S-mode) for mariners.

Gap analysis for e-navigation

13.22 The Sub-Committee considered the preliminary gap analysis based on the current understanding of what is likely to be contained within an agreed e-navigation users' requirements and the consequential e-navigation capabilities (NAV 53/13, paragraphs 21 to 24 and annex 3) and the comments of ICS (NAV 53/13/6) thereof. The Sub-Committee noted with appreciation the work done by the CG in carrying the preliminary gap analysis. However, the Sub-Committee agreed that at this stage it was premature and could pre-empt the development of users' requirements, users' services and system architecture and that the gap analysis should be undertaken after development of users' requirements.

Identification of essential functions of E-Navigation by marine accidents analysis

13.23 The Sub-Committee considered the information provided by Japan (NAV 53/13/1) on a method for identifying necessary functions for avoiding collisions with a view to facilitate the development of an E-Navigation strategy and agreed that this information should be considered by the CG when developing the users' requirements.

Redundancy of position fixing systems

13.24 The Sub-Committee considered the information provided by the United Kingdom (NAV 53/13/2) and IALA (NAV 53/13/5) on the need to provide a back-up to the Global Navigation Satellite Systems (GNSS) because of the vulnerabilities of GNSS. The Sub-Committee agreed that there was a need to provide an internationally agreed alternative system for complementing the existing satellite navigation, positioning and timing services to support e-navigation and recognized that potential back up systems could be made available and that it was premature to identify any specific system before the users' requirements for e-navigation had been finalized.

Introduction and use of AIS and as Aid to Navigation (AtoN)

13.25 The Sub-Committee considered the information provided by IALA (NAV 53/13/4) relating to the introduction and use of AIS and as Aid to Navigation (AtoN) and noted that IALA would submit a more detailed proposed to NAV 54.

Migration from traditional aids to navigation (AtoN) to virtual e-navigation aids

13.26 The Sub-Committee noted the views of the CG relating to developing an e-navigation strategy was to reduce navigational errors – from whatever cause – to prevent shipping accidents and ship-source marine pollution and that the traditional aids would not necessarily disappear once e-navigation had been adopted (NAV 53/13, paragraphs 9 and 10). The Sub-Committee agreed that e-navigation should not be viewed as a means to reduce or eliminate existing AtoN and that any decision to employ e-navigation as a means to replace traditional AtoN should only be considered once a full risk assessment had been carried out and the users' requirements had been finalized.

Revised terms of reference for the Correspondence Group on E-Navigation

13.27 The Sub-Committee agreed that, to progress the work for NAV 54, the intersessional Correspondence Group should be re-established under the co-ordination of the United Kingdom* and approved the draft terms of reference of the proposed Correspondence Group, given below.

13.28 Taking into account documents NAV 53/WP.4 and NAV 53/13/1 (Japan) and, the progress made at NAV 53 relating to the development of an e-navigation strategy and 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:

- .1 identify all potential users of e-navigation;
- .2 define the user needs for e-navigation;
- .3 review the need to consult other maritime agencies and interest groups – navigational practitioners, support agencies, research organizations, equipment manufactures and port managers; and
- .4 continue to develop other aspects of the strategic vision for e-navigation.

In order to structure the task of developing a Strategic vision for e-navigation using a holistic and top-down approach it is essential to provide a methodology and logical phases to define the essential elements of e-navigation. In this context, the Correspondence Group should develop a strategic vision taking into account the logical phases relating to:

- user identification;
- user requirements;

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- user services;
- identify existing systems;
- system requirements;
- gap analysis;
- role of cost benefit analysis; and
- system architecture.

The Correspondence Group should note that this is not a comprehensive list of logical phases and that some of the work can be undertaken simultaneously.

The Correspondence Group should submit a document to COMSAR 12 raising specific questions that should be addressed by COMSAR and prepare a final comprehensive report for submission to NAV 54.

13.29 The Sub-Committee instructed the Secretariat to inform COMSAR 12 on the progress made on the development of an E-Navigation strategy.

13.30 Bearing in mind the ongoing work on the development on an e-navigation strategy, the Sub-Committee invited the Committee to endorse the progress made at this session.]

14 DEVELOPMENT OF CARRIAGE REQUIREMENTS FOR ECDIS

14.1 The Sub-Committee recalled that, at NAV 51, the delegation of Norway, as co-ordinator of the Correspondence Group (NAV 51/6), had emphasized in particular the opinion of the Group that there was a sound basis for implementing a phased carriage requirement for ECDIS for certain types of ships. A phase-in programme for the carriage of ECDIS would provide certainty and clear direction to mariners, data distributors, equipment manufacturers and Hydrographic Offices. These measures would also accelerate the use and support of ECDIS which would benefit mariners and at the same time contribute to increasing the rates of ENC production.

14.2 The Sub-Committee also recalled that NAV 51 was of the view that there should be an FSA on the use of ECDIS on ships other than High-Speed Craft and Passenger Ships prior to any discussion on possible carriage requirement and that the outcome of this FSA would be taken into account when developing any proposals for a carriage requirement. With respect to the

feasibility of an appropriate FSA on the safety benefits of the carriage of ECDIS, NAV 51 was of the view that such an analysis was feasible and desirable. It was recognized that there were a number of factors which needed to be taken into account in assessing the benefits, costs and risks so as to ensure that the results of any FSA were meaningful. These factors included, but were not limited to:

- Clarification of the regulatory regime and the status of associated Performance Standards;
- Electronic Navigational Charts (ENC) coverage and ease of availability; and
- ECDIS training and familiarization.

14.3 The Sub-Committee noted that MSC 81 had considered document MSC 81/23/13 (Denmark and Norway) proposing to develop carriage requirements for ECDIS equipment, for subsequent inclusion in SOLAS chapter V, where the lower size limit of ships and other ship parameters should be recommended by the NAV Sub-Committee, based on the results of the FSA study, as well as other relevant factors identified at NAV 51, while the factor of ECDIS training and familiarization should be dealt with by the STW Sub-Committee. Having noted, in the context of the above proposal, the outcome of the FSA study on ECDIS/ENCs provided by Denmark and Norway (MSC 81/24/5 and MSC 81/INF.9), MSC 81 decided to include in the NAV Sub-Committee's work programme and the provisional agenda for NAV 53, a high priority item on "Development of carriage requirements for ECDIS", with a target completion date of 2008, instructing NAV 52 to give preliminary consideration to the matter.

14.4 The Sub-Committee also noted that NAV 52 had considered the issue in depth on a preliminary basis. In summing up the debate the Chairman had concluded that there had been considerable support for the results of the FSA study conducted by Japan, including its recommendations. The majority of delegations had been of the view that ENC coverage was a necessary prerequisite for the introduction of a mandatory carriage requirement of ECDIS. Some delegations had been of the view that this did not mean a 100% ENC coverage would be necessary or achievable. The Sub-Committee had concurred with the Chairman's summary and reiterated its invitation to the IHO and Members of the Sub-Committee to continue progress

towards ENC development. Member Governments were invited to submit suitable proposals and comments for consideration at NAV 53.

14.5 The Sub-Committee considered documents NAV 53/14 and NAV 53/INF.3 (Denmark, Finland, Norway and Sweden) proposing draft amendments to SOLAS regulation V/19, including the text of the detailed report of a study performed on the effect of ENC coverage on ECDIS Risk Reduction.

14.6 The Sub-Committee also considered document NAV 53/14/1 (Japan) providing a proposal for a draft amendment to SOLAS regulation V/19 for the application of carriage requirement for ECDIS.

14.7 There was an extensive debate on the development of carriage requirements for ECDIS. Some delegations were of the opinion that there was no need to change something when it had proved to be safe over a long period of time, namely paper charts. Others pointed out the problems of no adequate global ENC coverage especially around the coast of some developing countries and small islands, and on the human element and training aspects and related issues. Most members raising these concerns were of the opinion that a decision on a carriage requirement for ECDIS would therefore be premature at this stage, and called for postponing a decision thereon until these questions had been answered and existing problems including global ENC-coverage issues had been solved. The ICS observer was of the opinion that it was premature to mandate ECDIS carriage requirements as the system was not yet clearly defined.

14.8 Some delegations were of the view that carriage of ECDIS would in the long run prove to be cost-effective, accurate and lighten the workload of the mariner on the bridge, leading to less fatigue. A number of delegations indicated that they were fully committed to mandatory carriage requirements for ECDIS, and could support a phased in implementation schedule. One delegation was of the opinion that IMO should work towards a mandatory carriage requirement for new vessels only.

14.9 The Russian Federation updated the Sub-Committee on a recent study that had been undertaken to measure the stress factor on the bridge. The research was undertaken on a control group of 30 people to evaluate stress levels on people using ECDIS and those not using ECDIS. Results had shown that by use of ECDIS accounted for a reduction of 10 to 12% in the pulse rate.

The delegation also informed the Sub-Committee that by 2010, it was expected that there would be 85% ENC coverage worldwide.

14.10 The Chairman, in summing up the debate, stated that there had been a good intensive discussion. There had been a lot of arguments, both in favour and against the proposals for a mandatory carriage requirement for ECDIS. On the one hand, there was substantial support, at least "in principle" for the introduction of a carriage requirement, either on the basis of the proposal by Denmark, Finland, Norway and Sweden, or on the basis of the proposal by Japan. On the other hand, concerns and questions had been raised on the necessity, the feasibility and the cost-effectiveness of such carriage requirements, on the uncertainties of global ENC-coverage and related shortcomings in the content of ENC's, on the position of developing countries and small islands and on the human element and training aspects and related issues. The positive aspect of this discussion was that it had provided the Sub-Committee with a clearer picture of the pro's and con's of a carriage requirement, and this clearer picture might offer a good basis for the submission of proposals on the issue for NAV 54. In concluding, he invited Members and Observers to consider taking the following action:

- .1 the Russian Federation to provide further information on their research to NAV 54;
- .2 IHO to provide further updates on ENC-coverage and related issues to NAV 54;
and
- .3 Member States as well as observers to submit any inputs of value to enable the Sub-Committee to further consider the matter and take a professional, well-informed and balanced decision at NAV 54.

14.11 Member Governments were invited to submit suitable proposals for further consideration at NAV 54.

15 GUIDELINES FOR UNIFORM OPERATING LIMITATIONS OF HIGH-SPEED CRAFT

15.1 The Sub-Committee recalled that MSC 81 (MSC 81/25, paragraph 23.45), endorsing a proposal by DE 49, had decided to include, in the DE 50's work programme and the provisional agenda, a high priority item on "Guidelines for uniform operating limitations of high-speed craft", with a target completion date of 2009, and also in the work programmes of the COMSAR,

NAV and SLF Sub-Committees and the provisional agendas for COMSAR 11, NAV 53 and SLF 50, with a target completion date of 2008.

15.2 The Sub-Committee noted that DE 50 had considered document DE 50/18 (China) and also revisited documents DE 49/5/3 and DE 49/INF.5 (RINA), which were proposing the development of an MSC circular to guide Administrations in determining the operating limitations in a consistent manner, together with document DE 49/INF.5 providing additional background information in relation to the setting of operating limitations for high-speed craft.

15.3 The Sub-Committee also noted that, while discussing the proposals for limitations to be included in the guidelines, DE 50 had agreed that it needed further thorough consideration, since it was referring to one aspect of operating limitations for high-speed craft only, namely speed, and that many more limitations, including, *inter alia*, wash waves, wind force, temperature, following seas, etc., needed to be identified and considered. DE 50 had also agreed to establish a Correspondence Group on Uniform Operating Limitations of High-Speed Craft, under the co-ordination of Australia, which would submit a report to DE 51.

15.4 The Sub-Committee considered document NAV 53/15 (RINA), identifying various subjects i.e. safe handling situations, wave height limitations, discretionary aspects, wash wave restrictions, navigational safety and departure sea conditions for discussion in relation to determination of operational limitations of high-speed craft.

15.5 There was general support for the proposals outlined in RINA's document (NAV 53/15) and some Members were of the opinion that some consideration should be given to operations in ice-conditions, training in accordance with the 2000 HSC Code, and consistent application of operating limitations.

15.6 The Sub-Committee requested Members, in the meanwhile, to provide relevant input on the navigational aspects directly to the DE 50 Correspondence Group on Uniform Operating Limitations of High-Speed Craft.

15.7 The Sub-Committee, observing that no other substantial documents had been submitted on this issue, agreed to postpone further consideration of this item to NAV 54, when the outcome

of DE 51 on this issue would also be available. Members were invited to submit suitable proposals for consideration at NAV 54.

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

16.1 The Sub-Committee recalled that MSC 81 had reviewed the report of the Working Group on Passenger Ship Safety (MSC 81/WP.6) and agreed with the group's recommendation that the NAV Sub-Committee should be instructed to develop guidelines on the lay-out and ergonomic design of safety centres (or modify MSC/Circ.982), bearing in mind that draft regulation II-2/23.4 specified that the layout and ergonomic design should take into account the guidelines developed by the Organization.

16.2 The Sub-Committee also recalled that MSC 81 (MSC 81/25, paragraph 23.42), had decided to include, in the Sub-Committee's work programme and the provisional agenda for NAV 53, a high priority item on "Guidelines on the layout and ergonomic design of safety centres on passenger ships", with a target completion date of 2008.

16.3 The Sub-Committee noted in this context that, at MSC 82 (MSC 82/24, paragraph 3.104.1), the expanded Committee had adopted unanimously by resolution MSC.216(82) amendments to Chapter II-2, Construction – Fire Protection, Fire Detection and Fire Extinction, which would enter into force on 1 July 2010.

16.4 The Sub-Committee considered regulations II-2/3 and II-2/23 relating to safety centre on passenger ships in the context of development of Guidelines on the layout and ergonomic design of safety centres on passenger ships.

16.5 The observer from CLIA informed the Sub-Committee that some CLIA members were designing new ships based on the concept of the safety centre. CLIA indicated that it would submit a paper on the issue for consideration by NAV 54.

16.6 The Sub-Committee agreed that, since no other substantial documents had been submitted on this issue to this session, the matter should be postponed for further consideration at NAV 54. Members were invited to submit suitable proposals for consideration at NAV 54.

17 CASUALTY ANALYSIS

17.1 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.

17.2 The Sub-Committee observed that, at this session, 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 agreed to defer further consideration of the item to NAV 54.

18 CONSIDERATION OF IACS UNIFIED INTERPRETATIONS

18.1 The Sub-Committee recalled that, in order to expedite the 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.

18.2 The Sub-Committee recalled also that NAV 52 had considered document NAV 52/14 (IACS) clarifying the application of Rules 23(a), 27(b) of the COLREG 1972, as amended, including sections 3(b) and 9(b) of Annex I to the 1972 COLREG, as amended. NAV 52 had concurred with the view of IACS and, having considered document NAV 52/WP.2, annex 1, agreed to the draft MSC circular on unified interpretations of COLREG 1972, as amended (NAV 52/18, annex 9), for submission to MSC 82 for approval.

18.3 The Sub-Committee noted that MSC 82 had considered the above draft MSC circular, but decided (MSC 82/24, paragraphs 11.13 and 11.14) to refer it to NAV 53 for further consideration prior to approval on the basis of two comments received in plenary:

- .1 the first by the delegation of Japan, arguing that IACS Unified Interpretation COLREG 2 would exceed the existing provisions of the COLREG 1972. If the content of this circular was considered appropriate, its text should exclude existing ships constructed on or after 1 July 2007; and
- .2 the second by the delegation of the Russian Federation, expressing the view that the unified interpretation would go beyond the provisions of COLREG 1972.

18.4 The Sub-Committee observed that the Secretariat had never issued any interpretation of the COLREG. However, the Maritime Safety Committee had in the past issued MSC Circulars on Guidance for the uniform application of certain rules of the COLREG (MSC/Circs.320 and 473 are of relevance).

18.5 The Sub-Committee considered document NAV 53/18 (IACS) providing clarifications on and the basis for development of IACS Unified Interpretations COLREG 2.

18.6 Having briefly discussed the matter, the Sub-Committee agreed (paragraph 11.4 refers) to refer document NAV 53/18 to the Technical Working Group to be established under agenda items 4, 7, 9, 11, 18 and 21 (sub-item on revised performance standards for ECDIS) because of its inter-relation with regard to navigation lights.

Report of the Technical Working Group

[18.7 Having received and considered the Technical Working Group's report (NAV 53/WP.2), the Sub-Committee (with reference to paragraph 8.1 and annex 7), took action as summarized hereunder.]

[18.8 The Sub-Committee agreed a revised draft MSC circular on the Unified Interpretation of COLREG. The Group took into account the problems expressed during MSC 82 by Japan and the Russian Federation and agreed on modifications to the text developed at NAV 52 (document NAV 52/18, annex 9), as given at annex for submission to the Committee for approval at its eighty-fourth session.]

18.9 The Sub-Committee invited IACS to submit any further relevant IACS Unified Interpretation proposals to NAV 54 for its review.

19 WORK PROGRAMME AND AGENDA FOR NAV 54

19.1 The Sub-Committee recalled that, at MSC 78, the Chairman, in addressing the Committee's method of work relating to the consideration of proposals for new work programme items, had clarified that the objective of the Committee when discussing these proposals was to decide, based upon justification provided by Member Governments in accordance with the Guidelines on the organization and method of work, whether the new item should or should not be included in the sub-committee's work programme. 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. If it was decided to include the item in a sub-committee's work programme, 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.

19.2 The Sub-Committee noted that MSC 82 had agreed to include, in the Sub-Committee's work programme high priority items on:

- .1 "Code of conduct during demonstrations/campaigns against ships in high seas", with two sessions needed to complete the item;
- .2 "Amendments to the General Provisions on Ships' Routeing", with one session needed to complete the item;
- .3 "Review of COLREGs regarding the right of way of vessels over pleasure craft", with one session needed to complete the item;
- .4 "Measures to minimize incorrect data transmissions by AIS equipment", with two sessions needed to complete the item;
- .5 "Review of vague expressions in SOLAS regulation V/22", with two sessions needed to complete the item;
- .6 "Revision of the Guidance on the application of AIS binary messages", with two sessions needed to complete the item; and
- .7 "Improved safety of pilot transfer arrangements", with two sessions needed to complete the item.

19.3 Taking into account the progress made at the current session, the decisions of MSC 82, DE 50 and the provisions of the agenda management procedure, the Sub-Committee prepared a proposed revised work programme and a provisional agenda for NAV 54 (NAV 53/WP.7), as amended based on those approved by MSC 82 (NAV 53/2, annexes 1 and 2) and set out in annex ..., for consideration and approval by the Committee. While reviewing the work programme, the Sub-Committee invited the Committee to:

- .1 delete the following work programme items, as work on them has been completed:
- | | | | |
|-------|----------|---|-------|
| [.1.1 | item H.4 | Evaluation of the use of ECDIS and ENC development | 2007 |
| .1.2 | item H.5 | Development of guidelines for the installation of shipborne radar equipment | 2008 |
| .1.3 | item H.7 | Development of performance standards for navigation lights, navigation light controllers and associated equipment | 2007 |
| .1.4 | item H.9 | Guidelines on the control of ships in an emergency (in-co-operation with COMSAR) | 2007] |
- .2 rename/extend the target completion date of the following work programme items:
- | | | | |
|-------|----------|---|-------|
| .1.1 | item H.6 | Amendments to COLREGs Annex IV relating to distress signals | 2008 |
| [.1.2 | item H.3 | Development of Guidelines for IBS including performance standards for bridge alert management | 2009] |

Arrangements for the next session

19.4 The Sub-Committee anticipated that Working Groups on the following subjects might be established at NAV 54:

- .1 Ships' Routing;
- .2 Technical matters; and
- .3 E-navigation.

Dates of the next session

19.5 The Sub-Committee noted that the fifty-fourth session of the Sub-Committee had been tentatively scheduled to be held from [30 June to 4 July 2008] at IMO Headquarters.

20 ELECTION OF CHAIRMAN AND VICE-CHAIRMAN FOR 2008

20.1 In accordance with Rule 16 of the rules of Procedure of the Maritime Safety Committee, the Sub-Committee unanimously re-elected Mr. K. Polderman (The Netherlands) as Chairman and Mr. M. Sollosi (United States) as Vice-Chairman for 2008.

21 ANY OTHER BUSINESS

Revised Performance Standards for Electronic Chart Display and Information Systems (ECDIS)

21.1 The Sub-Committee noted that the MSC 82, in accordance with resolution A.886(21), had adopted resolution MSC.232(82) on Adoption of the Revised performance standards for Electronic Chart Display and Information Systems (ECDIS). In this respect MSC 82 had further instructed NAV 53 to review the performance standards and assess whether a common layout of controls, names or symbols for controls and output on the display for each control could be appropriately included therein and advise MSC 83 accordingly.

21.2 The delegation of Cyprus supported by the delegation of Panama explained that the basic intent of the review was to investigate whether it was practically feasible to incorporate into new ECDIS equipment, a set of common standard operating procedures with which ships' officers could familiarize themselves easily. This would ensure that officers transferring/serving on any particular ship were fully conversant with the basic operating procedures for ECDIS equipment to ensure safety of navigation.

21.3 The Sub-Committee briefly considered the matter and agreed that the issue be referred to the Technical Working Group for review and advice so that the same could be conveyed to MSC 83.

Report of the Technical Working Group

[21.4 Having received and considered the report of the Technical Working Group (NAV 53/WP.2), paragraph 7, the Sub-Committee took action as summarized hereunder.]

[21.5 The Sub-Committee noted that the Organization had developed standards for common names and common output on the display in resolution MSC.191(79) and SN/Circ.243. The Sub-Committee also noted that the IEC had developed standards for symbols for controls. Moreover, the ongoing work on INS and IBS was also addressing default display configurations and future work connected with E-navigation was considering a common S-mode configuration for bridge equipment. In the light of this ongoing work, the Sub-Committee concluded that it was premature to revise the ECDIS performance standards at this stage, but to await the outcome of these developments.]

Conclusions and Recommendations of the XVIth IALA Conference

21.6 The Sub-Committee recalled that MSC 82 had noted the information provided by IALA (MSC 82/23/7) outlining the conclusions and recommendations stemming from the XVIth IALA Conference (22 to 27 May 2006, Shanghai, China). The theme for the Conference had been *Aids to Navigation in a Digital World*, and the technical presentations had focused on these aspects and over 270 delegates, representing 42 countries had attended the Conference. MSC 82 had also referred document MSC 82/23/7 to the Sub-Committee for information and guidance in the course of its future work.

21.7 The Sub-Committee noted the information provided.

Guidance on providing safe working conditions for securing of containers

21.8 The Sub-Committee noted that DSC 10 had established the correspondence group on Guidance on providing safe working conditions for securing of containers, under the co-ordination of the United Kingdom. DSC 11, having noted the views of the correspondence group, as detailed in document DSC 11/13, (paragraphs 5 and 6), concerning a possible way forward in assisting in the identification of best practice to ensure that containerships have suitable and safe securing access and identifying best design criteria for new containerships to ensure suitable and safe securing access, invited the DE and NAV Sub-Committees to give comments on the views of the group.

21.9 The Sub-Committee observed that with respect to the above draft Guidance and the terms of reference of the aforementioned group, there were no items of relevance relating to navigational and operational matters. Hence, the Sub-Committee had no comments for the consideration of the Group.

21.10 The Secretariat was instructed to convey this outcome to the DSC Sub-Committee.

Consideration of the need for a presentation symbol for AIS-SART

21.11 The Sub-Committee noted that COMSAR 11 recalled that COMSAR 10 had endorsed the draft amendments to performance standards for SART with respect to circular polarization and invited the Committee to adopt them. COMSAR 11 had also recognized that SART devices were not, and should not, be used for distress alerting. SART devices provided a means of locating, after the transmission of a distress alert, and were useful tools for SAR authorities.

A corresponding amendment to the Performance Standards for AIS-SART to clearly distinguish between AIS-SART and AIS installation was accepted by COMSAR 11. In developing the Performance Standards, COMSAR 11 invited the Sub-Committee to consider the need for a presentation symbol for AIS-SART and invited the Committee to endorse this decision.

21.12 The observer from IEC informed the Sub-Committee that IEC Working Group 80 had already developed, in the context of resolutions MSC.192(79) and MSC.191(79), symbols for AIS Search and Rescue Transponder and AIS Aids to Navigation (both real and virtual).

21.13 The observer from IEC also agreed to offer these symbols to IMO as an input paper to NAV 54 for subsequent inclusion in SN/Circ.243 thereon.

Review of the draft amendments to the MODU Code

21.14 The Sub-Committee recalled that DE 49 had established a correspondence group and instructed it, to further develop the draft amendments to the MODU Code on the basis of document DE 49/14, giving also consideration to the proposals in documents SLF 48/9 (IADC) and SLF 48/9/2 (IACS) and to developments in ICAO concerning helicopter facilities on board ships; and to consider whether other sub-committees should be requested to review certain parts of the Code, where their expertise was required, and advise the Sub-Committee accordingly.

21.15 The Sub-Committee also recalled that DE 50 had requested SLF 50 and COMSAR 12 to review the parts of the draft amendments to the Code, as identified in paragraphs 6, 7 and 9 of the correspondence group report (DE 50/11), noting that this would mean that the revision of the Code could not be finalized at DE 50. The DE Sub-Committee had further considered that the draft amendments to the Code could also be referred to NAV 53 and FP 52 for their comments.

21.16 The Sub-Committee considered the draft amendments to the draft revised MODU Code, Chapter 11 – Radiocommunications and navigation (pages 37 to 40 of document DE 50/11), sections 11.2 and 11.11, including section 12.2 on pilot transfer arrangement, which were of relevance to navigation issues and concluded that the proposed amendments were correct.

21.17 The Secretariat was instructed to convey the outcome of the review to the DE Sub-Committee.

Amendment of the Performance Standards for VDR AND S-VDR

21.18 The Sub-Committee considered document NAV 53/21 (Germany) providing justification for the revision of the performance standards for VDR and S-VDR and to amend resolutions A.861(20) and MSC.163(78).

21.19 The Sub-Committee noted that Germany had also submitted document MSC 83/25/4 to the Committee, containing a suitable proposal for putting this issue on the work programme of the Sub-Committee.

Progress on Standards published by the IEC - VDR AND AIS

21.20 The Sub-Committee considered document NAV 53/21/1 (IEC) providing an update on the progress made in developing various IEC standards for Voyage Data Recorder, Radar equipment and ECDIS and noted with appreciation the information provided.

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

Prevention of maritime accidents due to driftwood

21.22 The Sub-Committee noted that, at MSC 82, the delegation of Japan had advised the Committee of a recent incident off the Japanese coast where a high-speed craft collided with driftwood, resulting in some 100 passengers being injured. In trying and prevent similar accidents, the Japan Coast Guard had requested ships to report sightings of such driftwood and other floating dangers in accordance with their obligations under SOLAS regulation V/31. The Japanese delegation had invited Member States to consider taking similar action. They had also advised the Committee that they would be submitting a paper to the Sub-Committee on the subject of such floating dangers.

21.23 The Sub-Committee considered document NAV 53/21/2 (Japan), suggesting that ships that find driftwood should be asked to communicate the information to ships in the vicinity and also to the competent authorities, in accordance with SOLAS regulation V/31.

[21.24 The Sub-Committee having considered document NAV 53/WP.9 agreed the draft MSC circular on Prevention of maritime accidents due to driftwood, set out in annex, for submission to MSC 84 for approval.]

Review of vague expressions in SOLAS regulation V/22

21.25 The Sub-Committee noted with interest the information provided by IACS (NAV 53/INF.7) relating to vagueness of requirements in SOLAS regulation V/22, which might lead to a lack of harmonized application. The Sub-Committee also noted that IACS Recommendation No. 95, set out in document NAV 53/INF.5, addressed problems related to vague expressions in SOLAS regulation V/22 and contained material that might be of value to the Sub-Committee.

Review of COLREGs regarding the right of way of vessels over pleasure craft

21.26 The Sub-Committee noted with interest the relevant information provided by Italy (NAV 53/INF.9) for amending the Convention on the International Regulation for Preventing Collisions at Sea, 1972, as amended to give commercial vessels the right of way over pleasure craft, in order to reduce the risk of collision in areas with high density of pleasure craft and where it was difficult to operate safely for large vessels. Italy wanted to underline that, if this general principle was recognized and endorsed, it would increase the level of safety at sea and would serve to prevent accidents in the future.

21.27 The Sub-Committee noted document NAV 53/21/3 (ISAF), supporting any practical initiative to help prevent accidents, but strongly recommending that the case, set out in document NAV 53/INF.9 (Italy), did not justify the proposed changes to COLREG.

AIS incorrect transmissions

21.28 The Sub-Committee noted with interest the information provided by IALA (NAV 53/INF.10) as the result of an IALA survey conducted in 2006 on AIS errors seen in VTS centres. The greatest obstacle to attaining improved standards of accuracy in the transmission of AIS data was the continuing existence of the Minimum Keyboard Display (MKD). Feedback had clearly indicated that the true value of AIS was only apparent when presented on a fully integrated graphical display.

Development of a code of conduct for assurance of the safety of crew and maritime navigation during demonstrations/campaigns against ships on the high seas

21.29 The Sub-Committee noted the information provided by Japan (NAV 53/INF.11) on the need for the development of a code of conduct to assure the safety of crew and maritime

navigation during demonstrations/campaigns against ships on the high seas, including Japan's request that a corresponding item be included in the provisional agenda for NAV 54.

Use of AIS binary messages

21.30 The Sub-Committee noted with interest the information provided by Germany and Sweden (NAV 53/INF.11), describing the technical limitations for the use of AIS binary messages and presenting the results of a study of the existing usage of the AIS VHF Data Link including further work needed to develop guidelines for the use of AIS Binary Messages.

Regional marine electronic highway in the East Asian seas

21.31 The Sub-Committee recalled 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.

21.32 The Sub-Committee noted that the overall objectives of the MEH project are to enhance maritime services, improve navigational safety and security and promote marine environment protection and the sustainable development and use of the coastal and marine resources of the Straits' littoral States, Indonesia, Malaysia and Singapore. On 31 May 2006, a Memorandum of Agreement (MOA) was signed between the Ministry of Environment, representing the Government of Indonesia, and IMO for the establishment of the Project Management Office (PMO) in Batam. Implementation of project start-up activities commenced in June 2006. A Project Launching Consultant had commenced work in Indonesia on 5 February 2007 for a period of six months whilst a Procurement Specialist had commenced work for three months on 2 March 2007. The PMO hosted by the Government of Indonesia was established in Batam Island, Indonesia and had become operational on 9 March 2007. The First Meeting of the Project Steering Committee (PSC) was held from 29 to 31 May 2007 in Batam, and was jointly organized and hosted by the Government of Indonesia and IMO. The PSC had approved the revised Project Implementation Plan and the budget; approved the scope of services for the hydrographic survey of the Traffic Separation Scheme of the Straits of Malacca and Singapore, as amended for inclusion in the tender document for that survey; noted that the International Hydrographic Organization (IHO) would review the draft Terms of Reference for the consultancy on Environmental Marine Information Overlays; agreed to hold an intersessional PSC Meeting in Singapore in conjunction with the Singapore Meeting to consider the report of the Technical Committee on Shore Base Infrastructure and Facilities, which would work by

correspondence, with the view to approval by the Second PSC Meeting. The meeting had further welcomed the offer of assistance of US\$850,000 (equivalent in Korean Won) by the Republic of Korea to the Project and agreed to integrate this offer of assistance and to reflect the partnership of the Republic of Korea in the Project Implementation Plan.

EXPRESSIONS OF APPRECIATION

21.33 The Sub-Committee further expressed appreciation to the following delegates who had recently relinquished their duties, retired or were transferred to other duties or were about to, for their invaluable contribution to its work and wished them a long and happy retirement or, as the case might be, every success in their new duties:

- Capt. Wagner Lázaro Ribeiro, Junior (Brazil) (On transfer);
- Mr. Heru Prasetyo (Indonesia) (on transfer);
- Capt. Ahmed Hill (Liberia) (on transfer);
- Mr. Mr. Yeang-Jun Jang (Republic of Korea) (on transfer);
- Capt. De Navío Guillermo Esteban Rangel Jalley (Venezuela) (on transfer);
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22 ACTION REQUESTED OF THE COMMITTEE

[to be prepared by the Secretariat]
