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NAVIGATION
55th session
Agenda item 21

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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-fifth session from 27 to 31 July 2009 at the Headquarters of the Organization, under the chairmanship of Mr. J. M. Sollosi (United States). The Vice-Chairman, Mr. Raja Datuk Malik (Malaysia), was also present.

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

ANGOLA
ANTIGUA AND BARBUDA
ARGENTINA
AUSTRALIA
BAHAMAS
BELGIUM
BOLIVIA
BRAZIL
CANADA
CHILE
CHINA
COLOMBIA
COOK ISLANDS
CUBA
CYPRUS
DEMOCRATIC PEOPLE'S
REPUBLIC OF KOREA
DENMARK
DOMINICAN REPUBLIC
ECUADOR
EGYPT
FINLAND

FRANCE
GERMANY
GHANA
GREECE
INDONESIA
IRAN (ISLAMIC REPUBLIC OF)
IRAQ
IRELAND
ITALY
JAPAN
KUWAIT
LIBERIA
LIBYAN ARAB JAMAHIRIYA
MALAYSIA
MALTA
MARSHALL ISLANDS
MEXICO
MOROCCO
NETHERLANDS
NEW ZEALAND
NIGERIA
NORWAY

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PERU
PHILIPPINES
POLAND
PORTUGAL
REPUBLIC OF KOREA
RUSSIAN FEDERATION
SAUDI ARABIA
SENEGAL
SOUTH AFRICA

SPAIN
SWEDEN
SYRIAN ARAB REPUBLIC
TURKEY
TUVALU
UKRAINE
UNITED KINGDOM
UNITED STATES
URUGUAY
VENEZUELA (BOLIVARIAN
REPUBLIC OF)

and of the following Associate Member of IMO:

HONG KONG, CHINA

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

WORLD METEOROLOGICAL ORGANIZATION (WMO)

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

INTERNATIONAL HYDROGRAPHIC ORGANIZATION (IHO)
COMMISSION OF THE EUROPEAN COMMUNITIES (EC)
MARITIME ORGANIZATION FOR WEST AND CENTRAL AFRICA (MOWCA)
PORT MANAGEMENT ASSOCIATION OF EASTERN AND SOUTHERN AFRICA
(PMAESA)
INTERNATIONAL MOBILE SATELLITE ORGANIZATION (IMSO)
INTERNATIONAL WHALING COMMISSION (IWC)
INTERNATIONAL CHAMBER OF SHIPPING (ICS)
INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO)
INTERNATIONAL SHIPPING FEDERATION (ISF)
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 TANKERS OWNERS
(INTERTANKO)
INTERNATIONAL MARITIME RESCUE FEDERATION (IMRF)

GREENPEACE INTERNATIONAL
CRUISE LINES INTERNATIONAL ASSOCIATION (CLIA)
INTERNATION ASSOCIATION OF DRY CARGO SHIPOWNERS (INTERCARGO)
THE INSTITUTE OF MARINE ENGINEERING, SCIENCE AND TECHNOLOGY
(IMarEST)
INTERNATIONAL SAILING FEDERATION (ISAF)
THE INTERNATIONAL MARINE CONTRACTORS ASSOCIATION (IMCA)
WORLD NUCLEAR TRANSPORT INSTITUTE (WNTI)
INTERNATIONAL HARBOUR MASTERS' ASSOCIATION (IHMA)
THE NAUTICAL INSTITUTE

Opening address of the Secretary-General

1.5 The Secretary-General welcomed the participants and delivered his opening address, the full text of which is reproduced in document NAV 55/INF.14.

2 DECISIONS OF OTHER IMO BODIES

2.1 The Sub-Committee noted, in general, decisions and comments pertaining to its work made by MSC 85, COMSAR 13, STW 40, FP 53, DE 52, FSI 17 and MSC 86 (NAV 55/2, NAV 55/2/1 and NAV 55/2/2) and considered them under the appropriate agenda items.

Outcome of MSC 86

Application of the Committee's Guidelines

Guidelines on the application of the Strategic Plan and the High-level Action Plan

2.2 The Sub-Committee noted that:

- .1 MSC 86 had recalled that MSC 85 had agreed that the sub-committees should focus their deliberations on the technical or operational aspects of the work assigned. Furthermore, the Committee had agreed that the Chairmen's meeting should consider amending the Guidelines on the organization and method of work of the Maritime Safety Committee and the Marine Environment Protection Committee and their subsidiary bodies (MSC-MEPC.1/Circ.2) to address the issue to avoid repetition of similar cases in future and to encourage submitters of new work programme items to submit relevant information and data to support their proposals at the sub-committee level (MSC 85/26, paragraph 23.40);
- .2 MSC 86 had discussed the draft amendments, set out in annex 3 to document MSC 86/WP.11, and remained evenly divided between the option to keep the text of the two new paragraphs 2.12.1 and 2.12.2, as proposed, and the option to

introduce a certain degree of flexibility allowing, in certain cases, discussion on the need for the work programme item, and a more stringent guidance on the provision of information by proponent(s) to facilitate the technical work of the subsidiary body;

.3 the following guiding principles had been highlighted in the course of the discussion to serve as the basis for further consideration of the matter:

.1 the consideration of the need and compelling need for new work programme items remained entirely with the Committees and should not be re-opened by sub-committees, as such;

.2 the Committees would filter the proposals and decide on the inclusion of new items in the work programme and agenda of the sub-committees, without pre-deciding on the outcome of the technical or operational consideration, which might bring the sub-committees to recommend that the work cannot be completed;

.3 sub-committees should carry out the work on substance and should not deviate from the instructions received from Committees; and

.4 as much information as possible should be gathered by the proponent(s) when putting forward proposals for new work programme items but it should not be assumed that sufficient information was always available at the time of the proposals;

.4 following the above discussion, MSC 86 had agreed to revisit the matter at its next session and invited interested Member Governments to consider how the text of the draft amendments could be improved to address the above views.

STATUS OF PLANNED OUTPUTS FOR THE 2008-2009 BIENNIUM AND PROPOSALS FOR THE HIGH-LEVEL ACTION PLAN OF THE ORGANIZATION AND PRIORITIES FOR PLANNED OUTPUTS OF THE COMMITTEES FOR THE 2010-2011 BIENNIUM

2.3 The Sub-Committee further noted that:

.1 MSC 86 had recalled that, in the context of the requests of the Assembly made in resolution A.989(25) on Strategic Plan for the Organization (for the six-year period 2008 to 2013) and resolution A.990(25) on High-level Action Plan of the

Organization and priorities for the 2008–2009 biennium, MSC 84 had instructed the Secretariat to submit the information concerning review of progress made in implementing the High-level Action Plan and priorities for the 2008–2009 biennium and prepare proposals for the High-level Action Plan for the 2010-2011 biennium, as may be updated following the outcome of MSC 86, for submission to C 102;

- .2 having considered document MSC 86/23/5 (Secretariat) on the status of the Committees' planned outputs for the 2008-2009 biennium, in the context of the outputs listed in resolution A.990(25), and recommendations made by the Chairmen's meeting (MSC 86/WP.11), MSC 86 had endorsed the status of the MSC planned outputs for the current biennium, which included updates by the Chairman and the Secretariat as authorized by the Committee, taking into account the outcome of MSC 86, for submission to C 102; and
- .3 MSC 86, having considered document MSC 86/23/16 (Secretariat), proposing modifications to the planned output of the Committees for the 2010-2011 biennium, which took into account the progress made by the sub-committees during the current biennium, and the recommendations made by the Chairmen's meeting (MSC 86/WP.11), had endorsed the proposals for the High-level Action Plan of the Organization and priorities for the 2010-2011 biennium, which included updates by the Chairman and the Secretariat as authorized by the Committee, taking into account the outcome of MSC 86, for submission to C 102, and requested the Secretariat to submit any changes to the annexed proposals emanating from NAV 55 and DSC 14 to CWGSP 9 or C/ES.25, as appropriate.

3 ROUTEING OF SHIPS, SHIP REPORTING AND RELATED MATTERS

General

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

aspects of the proposal. The results of the assessment would then be made available to the Sub-Committee by means of a working paper.

3.2 The Chairman informed the Sub-Committee that accordingly, he had, in co-operation with the Secretariat, prepared document NAV 55/WP.1 outlining a preliminary assessment of the ships' routing and ship reporting proposals. In general, the proposals were in conformity with the criteria outlined in MSC/Circ.1060 and MSC.1/Circ.1060/Add.1.

New Traffic Separation Schemes (TSSs)

New Traffic Separation Scheme "In the approaches to Lagos"

3.3 The Sub-Committee briefly considered a proposal by Nigeria (NAV 55/3/1) for the establishment of a new traffic separation scheme "In the approaches to Lagos".

New Traffic Separation Scheme "In the Bonny Channel and its approaches"

3.4 The Sub-Committee briefly considered a proposal by Nigeria (NAV 55/3/2) for the establishment of a new traffic separation scheme (TSS) "In the Bonny Channel and its approaches".

New Traffic Separation Schemes at "Adlergrund" and "Ślupska Bank" in the southern part of the Baltic Sea

3.5 The Sub-Committee briefly considered a joint proposal by Germany, Poland and Denmark (NAV 55/3/3) for the establishment of new traffic separation schemes at "Adlergrund" and "Ślupska Bank" in the southern part of the Baltic Sea.

New Traffic Separation Schemes surrounding Gotland Island

3.6 The Sub-Committee briefly considered a proposal by Sweden (NAV 55/3/4) for the establishment of three new traffic separation schemes surrounding Gotland Island in the Baltic Sea.

New Traffic Separation Scheme in the Black Sea in the area of south western coast of the Crimea

3.7 The Sub-Committee briefly considered a proposal by Ukraine (NAV 55/3/7) to establish a mandatory new traffic separation scheme in the area of south-western coast of the Crimea in the Black Sea in order to separate traffic flows heading to and from the north-western part of the

Black Sea (Odessa Bay), the Crimea, Kerch Strait and Caucasian seacoast. The proposed routing system was situated exclusively within Ukraine's territorial waters.

3.8 The Sub-Committee noted that presently there was only one IMO adopted mandatory routing system, namely "Mandatory route for tankers from North Hinder to the German Bight and vice versa". In addition, there were a further five mandatory no anchoring areas in different territorial waters of the world.

Amendments to existing Traffic Separation Schemes (TSSs)

Amendments to the existing Traffic Separation Schemes "Off Cape Roca" and "Off Cape S. Vicente"

3.9 The Sub-Committee briefly considered a proposal by Portugal (NAV 55/3/8) to amend the existing traffic separation schemes "Off Cape Roca" and "Off Cape S. Vicente".

Amendments to the existing Traffic Separation Schemes "Off Porkkala Lighthouse", "Off Kalbådagrund Lighthouse" and "Off Hankoniemi Peninsula" in the Gulf of Finland

3.10 The Sub-Committee briefly considered a proposal by Estonia, Finland and the Russian Federation (NAV 55/3/11) to amend the existing traffic separation schemes "Off Porkkala Lighthouse", "Off Kalbådagrund Lighthouse" and "Off Hankoniemi Peninsula" in the Gulf of Finland intended to enhance maritime safety, safety of navigation and protection of the environment.

Routing measures other than Traffic Separation Schemes (TSSs)

Establishment of a new two-way route "In the Bonny Channel and its approaches"

3.11 The Sub-Committee briefly considered a proposal by Nigeria (NAV 55/3/2) for the establishment of a new two-way route "In the Bonny Channel and its approaches".

Establishment of a new two-way route in the waters north of Gotland Island

3.12 The Sub-Committee briefly considered a proposal by Sweden (NAV 55/3/4) to establish a new two-way route north of Gotland Island in the Baltic Sea.

Establishment of an Area To Be Avoided (ATBA) and two Mandatory No Anchoring Areas in the western North Atlantic Ocean, off the coast of the United States

3.13 The Sub-Committee briefly considered a proposal by the United States (NAV 55/3/5) to establish an Area To Be Avoided (ATBA) and two mandatory No Anchoring Areas for the

purposes of safety, security, and vessel traffic management in the vicinity of the Neptune Deepwater Port to be located in the western North Atlantic Ocean off the coast of the United States.

Deep-water route leading to the new Jazan Economic City Port (JEC Port) in the southern Red Sea

3.14 The Sub-Committee briefly considered a proposal by Saudi Arabia (NAV 55/3) for the establishment of a Deep-water route to the new Jazan Economic City Port (JEC Port) in the Southern Red Sea including associated traffic separation schemes and an associated precautionary area within the proposed Deep-water route.

3.15 The representative of the United Kingdom Hydrographic Office, acting in his capacity as the Saudi Arabian representative and also as the expert who had assisted Saudi Arabia in developing this proposal informed the Sub-Committee that a revised proposal had been developed, and sought the Sub-Committee's approval to introduce the same.

3.16 The Sub-Committee agreed with the request to introduce the revised proposal in the Ships' Routeing Working Group.

Amendments to the existing Deep-water route leading to IJmuiden

3.17 The Sub-Committee briefly considered a proposal by the Netherlands (NAV 55/3/10) to amend the existing deep-water route leading to IJmuiden.

Mandatory ship reporting systems

Amendments to the existing mandatory ship reporting system "In the Strait of Gibraltar" (GIBREP)

3.18 The Sub-Committee briefly considered a joint proposal by Spain and Morocco (NAV 55/3/6) to amend the existing mandatory ship reporting system (GIBREP) in the area of the traffic separation scheme "In the Strait of Gibraltar", as a consequence of the establishment and future entry into operation of the new Morocco Vessel Traffic Services (VTS) in the area.

3.19 The delegation of the United Kingdom stated that it considered the GIBREP system to be a good example of a ship reporting system. It had been in operation since 1996 and had the full support of the United Kingdom. Strengthening a VTS in support of any mandatory reporting system and traffic separation scheme monitoring anywhere could only serve to improve navigational safety and again, the United Kingdom supported this. However, there were some

principles which guided and directed the establishment of new schemes and the modification of existing traffic management schemes. These included the valuable guidelines given in MSC/Circ.1060, as amended. Document NAV 55/3/6 (Spain and Morocco) accurately reflected the detailed and integrated arrangements between France and the United Kingdom over the establishment of the CALDOVREP system, which were quoted as an example, and had been the result of extensive consultations between the Governments concerned.

As to the proposal under consideration, the United Kingdom considered that there had been no effective co-operation between the jurisdictions of Governments having a common interest in this area of which the United Kingdom was one. Therefore, the United Kingdom felt strongly that the proposal needed further work and consultation before being considered by the Ships' Routeing Working Group. The United Kingdom, therefore respectfully requested Spain and Morocco to withdraw their paper and allow the United Kingdom to co-operate with them in developing a revised, fully collaborative proposal for presentation to the next session of the Sub-Committee.

3.20 The delegation of Spain stated that it would like to clarify an apparent inconsistency in the intervention by the United Kingdom. The delegation of the United Kingdom had declared that it was satisfied with the reporting system in the Strait of Gibraltar, which worked very well, but, having interests in the area and according to MSC/Circ.1060, the system should be improved and the document should be withdrawn. Spain was of the view that if the system worked well there was, therefore, no need to change it. Spain was concerned about the interest shown on this occasion because the Traffic Separation Scheme "In the Strait of Gibraltar" had been amended three times in the past and the United Kingdom had not declared any interest in the area. The NAV Sub-Committee was purely a technical body and according to document NAV 55/WP.1, the joint proposal by Spain and Morocco was technically sound. The United Kingdom had had seven weeks to submit to this Sub-Committee a document to comment on this proposal but had not done so. Spain did not think it was reasonable that the United Kingdom had done so at this stage in plenary. For these reasons, Spain requested that this document be referred to the Ships' Routeing Working Group for its review and approval.

3.21 The delegation of Morocco, following the intervention made by the delegation of the United Kingdom, noted that Morocco and Spain, by their proposal, were giving full effect to the decision taken by the Maritime Safety Committee (MSC 67/22/Add.1, annex 13) which provided that the mandatory ship reporting system should be amended when the Tangier VTS was

operational, as had been clearly explained by Spain. The proposed amendment would allow Morocco to fulfil its obligations as a coastal State in accordance with international maritime law. Morocco further noted that this proposal did not affect the existing traffic separation scheme in the Strait of Gibraltar, nor the meridian limits for submitting mandatory ship reports, nor did it require any additional reporting. The proposal was aimed at drawing the attention of Masters of ships proceeding from the Atlantic to the Mediterranean Sea to report to Tangiers VTS instead of Tarifa VTS as they had done since 1997, thus avoiding a double report.

Amendments to the existing mandatory ship reporting system (WETREP) in the Western European Particularly Sensitive Sea Area

3.22 The Sub-Committee briefly considered a proposal by Portugal (NAV 55/3/9) to amend the existing mandatory ship reporting system (WETREP) in the Western European Particularly Sensitive Sea Area, which included amendments to the details of the facilities to whom the reports had to be submitted.

Review of adopted mandatory ship reporting systems

3.23 The Chairman recalled that, at NAV 52, NAV 53 and NAV 54, his predecessor had taken the initiative as Chairman 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. Furthermore, section 4.4 of resolution MSC.43(64) 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.

3.24 The Chairman further recalled that, at NAV 54, the ships' routing working group had discussed the issue of the increasing number of mandatory ship reporting systems and whether AIS and/or LRIT could be used to satisfy the reporting requirements in such systems. In considering the way forward on this issue, NAV 54 had agreed that any review should be done in the context of SOLAS regulation V/11. It was at that stage premature for the Sub-Committee to undertake a full-scale review of all mandatory reporting systems as AIS and LRIT were still under development. Moreover, it was noted that there might be a way to tailor the further developments of AIS and LRIT to meet ship reporting requirements. The Sub-Committee also

agreed that Member Governments should, when they were considering the submission of a new reporting system, to review any existing system to determine whether such system could be amended to take into account of technological developments. Furthermore, NAV 54 had noted that paragraph 4.4 of the Guidelines and Criteria of Ship Reporting Systems provided for the review of existing ship reporting systems and that any Member Government could bring any concerns regarding a particular system to the attention of the Organization.

3.25 The Chairman noted that since the past three years, no submissions had been received by the Sub-Committee and 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.

Information for a Formal Safety Assessment (FSA) study undertaken by the United Kingdom and France into reducing risk in the English Channel/La Manche Traffic Separation Schemes (TSSs)

3.26 The Sub-Committee noted with interest the information provided by France and the United Kingdom (NAV 55/INF.10) on a Formal Safety Assessment (FSA) study undertaken by them into reducing risk in the English Channel/La Manche Traffic Separation Schemes (TSSs). The United Kingdom's Maritime and Coastguard Agency (MCA) in conjunction with the French Ministère de l'écologie, de l'énergie, du développement durable et de l'aménagement du territoire (MEEDDAT) were about to consider the results of an FSA study into reducing risk in the English Channel/La Manche Traffic Separation Schemes (TSS). At the Anglo-French Safety of Navigation Group (AFSONG) meeting held in May 2008, both the United Kingdom and France had raised concern that excessive speed by vessels in the Dover Strait/Pas-de-Calais TSS might be a contributing factor to accidents, near misses and groundings in the world's busiest shipping lane. It was intended that both the United Kingdom and France would discuss the final FSA study report at the next AFSONG meeting and agree what Risk Control Options (RCOs) might be used and how they might be implemented. Details of the FSA study would be made available to NAV 56.

Piracy and armed robbery against ships in waters off the coast of Somalia

Recommended routes for ships transiting the Gulf of Aden

3.27 As proposed by the Secretary-General, the Sub-Committee considered document (NAV 55/3/12) reporting on the establishment of an Internationally Recommended Transit Corridor (IRTC) therein and proposing the issuance of an SN circular recommending its use by

mariners transiting the area; and the development of a corresponding draft Assembly resolution with a view to submission to A 26 for adoption.

3.28 There was overwhelming and unanimous support by both Member Governments and industry organizations for the proposal submitted by the Secretary-General. The Sub-Committee commended him for his proactive approach in submitting this proposal, being only one of the many actions undertaken by him in his untiring attempt to combat piracy and armed robbery against ships, which was timely in view of the approaching end of the monsoon season in the region and the anticipated increase in piracy attacks as a result. There was, therefore, a sense of urgency in the need for providing information expeditiously to mariners on the proposed measures to help combating piracy and armed robbery against ships in waters off the coast of Somalia.

3.29 The invited expert from EU OHQ/ATALANTA gave a presentation on the IRTC established by the navies in the Gulf of Aden and, in particular, provided details on the rationale behind this activity. In addition, details on reporting requirements and operational aspects of ships participating in the system were explained.

3.30 Accordingly, the Sub-Committee agreed to refer document NAV 55/3/12 to the Ships' Routeing Working Group for consideration and development of a draft SN circular on the IRTC, to be revised or updated, as necessary; as well as a draft Assembly resolution recommending the use of the IRTC with a view to submission to C/ES.25 for approval and transfer to the 26th session of the Assembly for adoption.

Establishing the Ships' Routeing Working Group

3.31 After a preliminary discussion, as reported in paragraphs 3.1 to 3.30 above, the Sub-Committee re-established the Ships' Routeing Working Group and instructed it, taking into account any decisions of, and comments and proposals made in Plenary as well as relevant decisions of other IMO bodies (item 2), to:

- .1 consider all documents submitted under agenda item 3 regarding routeing of ships and related matters and prepare routeing and reporting measures, as appropriate and recommendations for consideration and approval by Plenary;

- .2 consider the relevant parts (Nos. 13, 18, 22, 32, 92, 104, 110, 121, 122, 125, 130, 131, 132, 133, 145, 146, 147, 150 and 166) of the annex to document NAV 55/20 (United Kingdom), containing the recommendations and comments of the existing NAV related codes, recommendations and guidelines of non-mandatory instruments and prepare recommendations for consideration and approval by Plenary;
- .3 consider document NAV 55/20/1 (Islamic Republic of Iran), suggesting review of the Ships Position Reporting Format in respect of ships reporting position by VHF despite the availability of the same information through AIS so as to avoid duplication of the information and prepare recommendations for consideration and approval by Plenary;
- .4 take into account the role of the human element guidance as updated at MSC 75 (MSC 75/24, paragraph 15.7) including the Human Element Analysing Process (HEAP) given in MSC/Circ.878-MEPC/Circ.346 in all aspects of the items considered; and
- .5 submit a report to Plenary on Thursday, 30 July 2009 for consideration at Plenary.

Report of the Ships' Routeing Working Group

[3.32 Having received and considered the Working Group's report (NAV 55/WP.2), the Sub-Committee approved it in general and, in particular (with reference to paragraphs 3.1 to 10.4 and annexes 1 to 13), took action as summarized hereunder.

New Traffic Separation Scheme "In the approaches to Lagos"

3.33 While the Sub-Committee agreed in principle on the establishment of a new TSS "In the approaches to Lagos", the delegations of the United Kingdom and United States expressed their concerns on the accuracy of the position data provided, the unavailability of survey data, the uncertainty over the completion date of the VTS centre and the rehabilitation of other aids to navigation, all of which was in progress. The Sub-Committee therefore recommended that Nigeria liaise with the United Kingdom Hydrographic Office and submit a revised proposal for consideration at the Sub-Committee's next meeting when further information would be available.

New Traffic Separation Scheme “In the Bonny Channel and its approaches”

3.34 The Sub-Committee agreed in principle on the establishment of a new TSS, but referred to an earlier decision taken with concerns on a perceived inaccuracy of the geodetic data provided by Nigeria, the unavailability of survey data, the non completion of dredging of a small stretch of the Bonny river opposite the NLNG terminal, and the uncertainty over the non-completion date of the VTS centre, all of which was in progress.

3.35 The Sub-Committee therefore recommended that Nigeria liaise with the United Kingdom Hydrographic Office, review their proposal and to submit a revised submission at the Sub-Committee’s next meeting when further information would be available.

New Traffic Separation Schemes at “Adlergrund” and “Slupska Bank” in the southern part of the Baltic Sea

3.36 The Sub-Committee approved the proposed new Traffic Separation Scheme at “Adlergrund” and “Slupska Bank” as set out in annex ..., which the Committee is invited to adopt.

New Traffic Separation Schemes surrounding Gotland Island

3.37 The Sub-Committee approved the proposed three new traffic separation schemes surrounding Gotland Island including changing the name of the existing TSS “Off Gotland Island” to “North Hoburgsbank” as set out in annex ..., which the Committee is invited to adopt.

New Traffic Separation Scheme in the Black Sea in the area of south-western coast of the Crimea

3.38 The Sub-Committee recalled that for the time being only one mandatory IMO-adopted Traffic Separation Scheme for certain types of ships existed. The Sub-Committee noted the working group’s view that there was no compelling need to establish another mandatory Traffic Separation Scheme as proposed by the delegation of the Ukraine. For this reason the majority of delegates supported the establishment of a new Traffic Separation Scheme in order to increase the safety of navigation in the area concerned as long as such a scheme was non-mandatory.

3.39 The Sub-Committee approved the proposed new Traffic Separation Scheme in the Black Sea in the area of the south-western coast of the Crimea as a non-mandatory TSS as set out in annex ..., which the Committee is invited to adopt.

Amendments to existing Traffic Separation Schemes (TSSs)

Amendments to the existing Traffic Separation Schemes “Off Cape Roca” and “Off Cape S. Vicente”

3.40 The Sub-Committee approved the proposed amended Traffic Separation Schemes “Off Cape Roca” and “Off Cape S. Vicente” as set out in annex ..., which the Committee is invited to adopt.

Amendments to the existing Traffic Separation Schemes “Off Kalbådagrund Lighthouse”, “Off Porkkala Lighthouse” and “Off Hankoniemi Peninsula” in the Gulf of Finland

3.41 The Sub-Committee approved the proposed amended Traffic Separation Schemes “Off Kalbådagrund Lighthouse”, “Off Porkkala Lighthouse” and “Off Hankoniemi Peninsula” as set out in annex ... , which the Committee is invited to adopt.

Routeing measures other than Traffic Separation Schemes (TSSs)

Establishment of a new two-way route “In the Bonny Channel and its approaches”

3.42 The Sub-Committee, by referring to an earlier decision taken on a perceived inaccuracy of the geodetic data provided by Nigeria, commended to the delegation of Nigeria to review their proposal and submit a revised submission at the Sub-Committee’s next meeting.

Establishment of a new two-way route “Salvorev” in the waters north of Gotland Island

3.43 The Sub-Committee approved the proposed establishment of a new two-way route in the waters north of Gotland island, the two-way route “Salvorev” as set out in annex ... , which the Committee is invited to adopt.

Establishment of an Area to Be Avoided (ATBA) and two Mandatory No Anchoring Areas in the western North Atlantic Ocean, off the coast of the United States

3.44 The Sub-Committee approved the proposed establishment of an Area to Be Avoided (ATBA) and two Mandatory No Anchoring Areas in the western North Atlantic Ocean, off the coast of the United States, with some corrections to the description as set out in annex ... , which the Committee is invited to adopt.

Routeing measures leading to the new Jazan Economic City Port (JEC Port) in the southern Red Sea

3.45 The Sub-Committee was satisfied with the changes made to the Routeing measures leading to the new Jazan Economic City Port (JEC Port) with some corrections as set out in annex ..., and approved the proposed routeing system, which the Committee is invited to adopt.

Amendments to the existing Deep-water route leading to IJmuiden

3.46 The Sub-Committee approved the proposed amendments to the existing Deep-water route leading to IJmuiden with corrections to the description as set out in annex ..., which the Committee is invited to adopt.

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

3.47 The new TSSs and amendments to the existing TSSs and other routeing measures mentioned in above paragraphs ... to ... will be implemented at a date not less than six months after adoption by the Committee.

Mandatory ship reporting systems**Amendments to the existing mandatory ship reporting system “In the Strait of Gibraltar” (GIBREP)**

3.48 The Sub-Committee approved the proposed amendments to the existing mandatory ship reporting system “In the Strait of Gibraltar” (GIBREP) as set out in annex ..., which the Committee is invited to adopt.

Amendments to the existing mandatory ship reporting system (WETREP) in the Western European Particularly Sensitive Sea Area

3.49 The Sub-Committee approved the proposed amendments to the existing mandatory ship reporting system (WETREP) in the Western European Particularly Sensitive Sea Area as set out in annex ..., which the Committee is invited to adopt.

Implementation of Mandatory Ship Reporting Systems

3.50 The new mandatory ship reporting system including the amendments to the existing mandatory ship reporting system mentioned in above paragraphs ... to ... will be implemented at a date, not less than six months after adoption by the Committee.

Piracy and armed robbery against ships in waters off the coast of Somalia

Recommended routes for ships transiting the Gulf of Aden

3.51 The Sub-Committee welcomed the Internationally Recommended Transit Corridor (IRTC) for use by ships transiting that area and proposed only minor amendments to the draft SN circular and the draft Assembly resolution which include, *inter alia*, addition of the website reference of MSCHOA.

3.52 The Sub-Committee agreed to the proposed SN circular and the draft Assembly resolution recommending the use of the IRTC by mariners transiting that area, as set out in annex ..., for approval by C/ES 25 and conveying to A 26 for adoption.]

4 DEVELOPMENT OF GUIDELINES FOR IBS, INCLUDING PERFORMANCE STANDARDS FOR BRIDGE ALERT MANAGEMENT

4.1 The Sub-Committee recalled that MSC 82, noting that the Sub-Committee 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 in 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 recalled that DE 51 had considered documents DE 51/6 and DE 51/2/2 (Secretariat), reporting on the outcome of NAV 53, DSC 12 and FP 52 and noted that NAV 53 did not have any comments on the proposed revision but noted that the work by the DE Sub-Committee was related to the work of the NAV Sub-Committee's IBS Correspondence Group and that ongoing liaison was required and consequently NAV 53 had instructed the IBS Correspondence Group to continue liaising with the DE Sub-Committee to ensure consistent treatment of alerts, including alarms and indicators. Secondly, DE 51 had noted document DE 51/6/1 (Germany), informing it on the progress made by the NAV Correspondence Group on Integrated Bridge Systems (IBS) with regard to the development of a bridge alert management as part of the guidelines for IBS, and invited the group to continue participating in the work of the Sub-Committee on the revision of the Code on Alarms and Indicators. DE 51 had postponed final consideration of the draft revised Code to DE 52 and requested IACS to finalize the draft revised Code on Alarms and Indicators and submit it to DE 52.

4.3 The Sub-Committee noted that DE 52 had considered the German document (DE 52/4/1) concerning the harmonization of the draft performance standards with the draft Code on Alarms and Indicators with regard to issues like definition of priorities, presentation of alerts and handling of the states of alerts. DE 52 had agreed to a draft Assembly resolution on Adoption of the Code on Alerts and Indicators, 2009, and to insert a definition for the term “signal” in the draft revised Code, defining it as an audible indication, forming a counterpart to the existing definition of “indicator” as a visual indication.

4.4 The Sub-Committee briefly discussed the report by Germany (NAV 55/4) summarizing the work and recommendations of the Correspondence Group on IBS regarding the development of guidelines for bridge equipment and systems, their arrangement and integration and the development of performance standards for Bridge Alert Management.

4.5 The Sub-Committee noted:

- .1 the suggestion in paragraph 9 to replace the existing performance standards for IBS (resolution MSC.64(67), annex 1) with the draft guidelines for bridge equipment and systems, their arrangement and integration and to update the footnote in SOLAS chapter V, regulation 15 and regulation 19, to the new draft guidelines;
- .2 the information provided in paragraph 14 on the recommendation to consider the development of appropriate instruments for ensuring the application of the general requirements of modules A and C of the draft performance standards for Bridge Alert Management to all equipment on the bridge presenting alerts; and
- .3 the proposal to develop guidelines (SN/Circ.) for the presentation of voice alert messages as discussed in paragraph 15; and the information provided in paragraph 16 regarding the need to consider operational and technical issues for the presentation of voice alerts.

4.6 The Sub-Committee agreed to refer document NAV 55/4 to the Technical Working Group, to be established, for detailed consideration and finalization of:

- .1 proposed draft guidelines for bridge equipment and systems, their arrangement and integration; and

.2 proposed draft performance standards for Bridge Alert Management.

4.7 The Sub-Committee briefly considered document NAV 55/4/1 (Australia) providing comments on issues related to the building of High-Speed Craft (HSC) and, in particular, the design and fabrication of bridge navigation systems. Australia had recommended that the most effective and expedient solution to this would be to develop a draft safety of navigation circular bringing the issues to the attention of all concerned.

4.8 The Sub-Committee supported the development of a draft MSC circular on High-Speed Craft (HSC) compliance with the provisions of SOLAS regulations V/18 to V/20 and agreed to refer document NAV 55/4/1 to the Technical Working Group, to be established, for finalizing a draft MSC circular.

4.9 The Sub-Committee also briefly considered document NAV 55/4/2 (United Kingdom) providing general comments on the report of the Correspondence Group. The United Kingdom was of the opinion that the report of the Correspondence Group's had highlighted several other key areas that were outside of the Correspondence Group's remit and spread over the responsibility of several other sub-committees, who might need to be involved. A goal-based, holistic, ship-wide approach was required, possibly involving risk assessment as the first step. Accordingly, the United Kingdom had recommended that a review of the work completed by the CG and its impact on other work being carried out by sub-committees was needed.

4.10 The delegation of Germany stated that the correspondence group on INS/IBS had continued to liaise with the Sub-Committee on Design and Equipment (DE) to ensure consistent treatment of alerts including alarms and indicators. Furthermore, the correspondence group had liaised with IACS to develop a revised Draft of the Code of Alarms and Indicators. Comments were provided for a harmonized treatment of alerts onboard and for the harmonization of the revised code with the bridge alert management performance standards. The revised Code had been discussed at DE 52 and approved by MSC 86 for adoption.

The delegation of Germany further stated that the Code of Alarms and Indicators was an independent IMO instrument and did not depend on other standards, and, vice-versa, the performance standards for bridge alert management did not depend on the Code but were harmonized with it. The performance standards could be applied for all types of bridges but

should be made applicable first to new ships. A phased in introduction similar to that for ECDIS could be considered.

4.11 The Secretariat explained that as consideration of the key areas identified by the United Kingdom in document NAV 55/4/2 had been referred to several other sub-committees, the NAV Sub-Committee was unable to allocate these tasks to them, as this was the remit of the Maritime Safety Committee. Accordingly, it was suggested that the United Kingdom might wish to put forward a new work programme item for consideration by the Committee.

4.12 The Sub-Committee noted with interest the information provided by the Republic of Korea (NAV 55/INF.3) on the results of a research project on the Integrated Ship Bridge Alarm System, which were expected to contribute to the discussion on the Bridge Alarm Management which was one of the major modules of the Integrated Bridge System (IBS).

4.13 The Sub-Committee noted with interest the information provided by Japan (NAV 55/INF.5) on their experiences of developing industrial standards for voice alarm/control system, based on Japanese Industrial Standards (JIS F 0062) as reference, as contributing to the discussions on this issue. Japan recognized the necessity of considering other relevant items in designing and standardizing a voice alarm system, in addition, to the “phrases” for the voice alarm system.

4.14 The Sub-Committee agreed to refer documents NAV 55/4, NAV 55/4/1, NAV 55/4/2, NAV 55/INF.3 and NAV 55/INF.5 to the Technical Working Group to be established under agenda items 4, 6, 7, 8, 10, 20A and 20C.

Establishing the Technical Working Group

4.15 Having also considered agenda items 6, 7, 8, 10, 20A and 20C 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 these agenda items and, taking into account any decisions of, and comments and proposals made in Plenary, undertake the following tasks:

- .1 consider documents NAV 55/4 and NAV 55/INF.3 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 SN circular on Guidelines for bridge equipment and systems, their arrangement and integration (NAV 55/4, annex 1) (agenda item 4); and
- .2 finalize the proposed draft performance standards for Bridge Alert Management (NAV 55/4, annex 2) (agenda item 4);
- .2 consider documents NAV 55/4 and NAV 55/INF.5 and provide comments and guidance on the proposal to develop guidelines (SN/Circ.) for the presentation of voice alert messages, the need to consider operational and technical issues for the presentation of voice alerts and also, if considered necessary, a justifiable and compelling need for developing the associated Guidelines for voice alert messages (NAV 55/4, paragraphs 15, 16 and 17) (agenda item 4);
- .3 consider document NAV 55/4/1 and finalize a draft MSC circular on High-Speed Craft (HSC) compliance with the provisions of SOLAS regulation V/18 to V/20 (NAV 55/4/1, paragraph 13 and annex) (agenda item 4);
- .4 consider documents NAV 55/6, NAV 55/6/1, NAV 55/6/2 and NAV 55/INF.12, taking into account the proposals contained in documents MSC 83/25/4, MSC 83/25/8, MSC 83/25/9, MSC 83/25/18 and MSC 84/22/18, and:
 - .1 prepare draft text of revised performance standards for VDR (resolution A.861(20)) using the annex of document NAV 55/6/1 as the basic document; and
 - .2 consider the proposed amendment to SOLAS regulation V/20 and provide comments, as appropriate (agenda item 6);
- .5 consider document NAV 55/7 and prepare a draft MSC circular on Guidance on procedures for updating shipborne navigation and communication equipment for review/comments by COMSAR 14, final review by NAV 56, and approval by MSC 88 (agenda item 7);

- .6 prepare, as appropriate, recommendations, opinions and liaison statements to appropriate ITU bodies in relation to documents NAV 55/8, NAV 55/8/6, NAV 55/8/5, NAV 55/10/1, NAV 55/8/1, NAV 55/8/2, NAV 55/8/3 and NAV 55/8/4 (agenda items 8 and 10);
- .7 consider documents MSC 83/15/3, NAV 55/10 and MSC.1/Circ.1252 with respect to the proposed amendment to SOLAS regulation V/18 including the linkages between the annual radio inspection of AIS and the renewal or endorsement of a safety equipment certificate and provide recommendations and comments, as appropriate (agenda item 10);
- .8 consider the annex of document NAV 55/20 (Nos. 7, 9, 11, 12, 14, 17, 19, 21, 23, 24, 25, 31, 34, 37, 41, 44, 45, 48, 49, 52, 53, 67, 68, 69, 70, 82, 91, 94, 95, 98, 100, 111, 123, 124, 126, 127, 134, 135, 136, 138, 140, 144 and 162) (agenda item 20A);
- .9 consider document NAV 55/20/2 with respect to the reset function of the BNWAS and advice, as appropriate (agenda item 20C);
- .10 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
- .11 submit a report to Plenary on Thursday, 30 July 2009 for consideration at Plenary.

Report of the Technical Working Group

[4.16 Having received and considered the Technical Working Group's report (NAV 55/WP.4), the Sub-Committee (with reference to paragraphs 3.1 to 3.13 and annexes 1 to 3), took action as summarized hereunder.

Draft SN/Circular on Guidelines for bridge equipment and systems, their arrangement and integration

4.17 The Sub-Committee considered document NAV 55/4, annex 1, containing the draft guidelines for bridge equipment and systems, their arrangement and integration. The Sub-Committee noted that the guidelines aim to support the design of bridge equipment and systems, their arrangement and integration for safe and effective operation of the vessel under the

control of the bridge team and pilot, applying SN.1/Circ.265. The Sub-Committee further noted that the guidelines could be seen as an umbrella document for bridge design and layout addressing issues not covered or not completely covered within other IMO instruments, giving guidance on applicable IMO instruments related to the issues addressed within the guidelines.

4.18 The Sub-Committee agreed that these guidelines superseded the existing performance standards for IBS (resolution MSC.64(67), annex 1). The Sub-Committee further agreed that the footnote in SOLAS chapter V, regulation 15 and regulation 19, should be updated, providing reference to the new guidelines for bridge equipment and systems, their arrangement and integration, and instructed the Secretariat accordingly.

4.19 The Sub-Committee noted the views of the United Kingdom that there were aspects of resolution MSC.64(67), annex 1, which were not fully covered in the current proposals and, as such, they believed that the resolution should be superseded only to the extent to which these proposals applied.

4.20 The Sub-Committee finalized the draft SN/Circular on Guidelines for bridge equipment and systems, their arrangement and integration, as set out at annex ..., for approval by the Committee.

Draft performance standards for Bridge Alert Management

4.21 The Sub-Committee considered document NAV 55/4, annex 2, containing draft performance standards for Bridge Alert Management, taking into account document NAV 55/INF.3 (Republic of Korea) containing information on the result of a research project on the Integrated Ship Bridge Alarm System. It was noted that the Republic of Korea would continue studying the issue and would provide additional information to a future meeting of the Sub-Committee.

4.22 The Sub-Committee noted that the purpose of the alert management specified in the draft performance standards was to enhance the handling, distribution and presentation of alerts on the bridge to enable the bridge team to devote full attention to the safe operation of the ship and to immediately identify any abnormal situation requiring action to maintain the safe operation of the ship. It was considered that in order to harmonize the presentation of priority, states, classification, handling, and distribution of alerts on the bridge the general requirements of modules A and C should be made applicable for relevant equipment on the bridge presenting alerts.

4.23 The Sub-Committee finalized the draft MSC resolution on performance standards for Bridge Alert Management, as set out at annex ..., for adoption by the Committee.

Voice alert messages

4.24 The Sub-Committee noted that the Correspondence Group on IBS had considered, in the framework of the development of performance standards for Bridge Alert Management, the issue of unambiguous standard phrases for voice alerts as requested by the Sub-Committee (NAV 55/4, paragraphs 15 to 17). The Sub-Committee also noted document NAV 55/INF.5 (Japan) providing information on Japanese experiences of developing industrial standards for voice alarm/control systems and providing Japanese Industrial Standards (JIS F 0062). It was noted that more work would be needed to standardize voice alarm/control systems.

4.25 The Sub-Committee concurred in general with the view of the Correspondence Group that guidelines for voice alert messages, comparable to SN/Circ.243 (Guidelines for the presentation of navigation-related symbols, terms and abbreviations), should be developed to promote a consistent and harmonized use of voice alert messages. The Sub-Committee further agreed that there would be a need to consider in addition operational and technical issues for the presentation of voice alerts, as for example presentation on the various systems, bridge environment, varying number of operators on the bridge, priority against existing audible devices and combination with the visual and audible alert presentation.

4.26 The Sub-Committee noted that this issue would require the need for a new work programme item and that extension of the existing work programme item was not appropriate. Therefore, the Sub-Committee invited Members who wished to develop the associated guidelines, to submit a proposal for a new work programme item for consideration by the Committee. The Sub-Committee noted the view of the Bahamas that they did not agree that there was a compelling need for a new work programme item in this regard and that it should not be a high priority for the Organization.

Draft MSC circular on High-Speed Craft (HSC)

4.27 The Sub-Committee further developed and finalized the draft MSC circular on High-Speed Craft (HSC) Compliance with the provisions of SOLAS regulations V/18 to 20, as set out at annex ..., for approval by the Committee.

4.28 The Committee was invited to delete the item “Development of Guidelines for IBS, including performance standards for bridge alert management” from the Sub-Committee’s work programme, as the work on this item had been completed (paragraph 18.5.1.1.1).]

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

5.1 The Sub-Committee recalled that NAV 53 had considered a proposal by Brazil (NAV 53/3) supplemented by a study carried out by DNV and PETROBRAS (NAV 53/INF.2), which aimed at designating an Area to be Avoided in waters off the Brazilian south-east coast, in the Campos Basin region, in order to reduce the risk of collision in an area with a high concentration of oil rigs, production systems and FPSOs. The second part of the proposal was to extend the safety zones around the units which constituted 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. 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 no established procedures and guidelines in order to determine any proposed extension. It was proposed 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 ensure that safety of navigation was taken consistently into account. Proposals should be judged on an objective basis so that the size of any adopted safety zone was no larger than the minimum necessary to achieve safety of navigation.

5.2 The Sub-Committee also recalled that NAV 53 had subsequently approved the proposed new Area to be Avoided “Off the Brazilian south-east coast, in the Campos Basin region” and observed that the majority of the Ships’ Routeing Working Group had recommended that the Sub-Committee should invite the Committee to establish as a high-priority work item on the development of guidelines, principles and standards for the evaluation of the extension of safety zones larger than 500 metres, which according to UNCLOS Article 60(5) “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. The Chairman invited interested Parties to submit appropriate submissions on the matter to the Committee.

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

5.4 The Chairman informed the Sub-Committee that at this session no proposals had been received although this was a high-priority work item on the Sub-Committee's work programme. He further suggested that consideration of this item be deferred to NAV 56.

5.5 The delegation of the United Kingdom, noting that this was a high-priority item, proposed that the Sub-Committee should proceed on this issue without delay and should therefore establish a Correspondence Group to work intersessionally and report to NAV 56.

5.6 There was considerable support for the proposal by the United Kingdom. Accordingly, the Sub-Committee agreed to the establishment of a Correspondence Group under the coordination of [.....]* to undertake the following tasks:

- .1 review resolutions A.671(16) and A.572(14), as amended including document MSC 84/22/4 (United States and Brazil) and develop relevant guidelines for recommending Safety Zones larger than 500 metres around artificial islands, installations and structures in the Exclusive Economic Zone (EEZ) including multiple structure installations; taking into account the General Provisions on Ships' Routing, which provide a useful and valuable framework;

*

- .2 address means for ensuring the safety of navigation and of the artificial island, installations, or structures from collisions or allisions of passing vessels, while at the same time assuring a reasonable relationship of the proposed safety zone to the nature and function of the artificial island, installation or structure, and while remaining fully consistent with the rights and duties of other States in the EEZ in accordance with international law as referenced in Article 58 of UNCLOS; and
- .3 provide advice and recommendations for consideration by NAV 56.

5.7 Members were invited to submit relevant proposals for consideration at NAV 56.

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

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

- .1 document MSC 83/25/4 (Germany) stating that evaluation of data retrieved from existing VDR installations had shown that in many cases the audio recordings were of bad quality and sensor signals were not recorded because the sensor failure had not been recognized during operation. This had in certain cases made it impossible to use the stored data for the intended purpose. It was therefore essential to amend the performance standards in order to allow a VDR to fulfil its intended purpose;
- .2 documents MSC 83/25/8 and MSC 83/25/9 (Egypt), in which Egypt had proposed that a second radar, second VHF and CCTV cameras needed to be connected to the VDR; there was a need to modify VDR capsule release from its base to facilitate difficulty of VDR capsule retrieval on recovery operation by ROV. Secondly, the use of a mobile hard disk to ease information retention in cases of abandon ship could save retrieval operation costs,

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

6.2 The Sub-Committee further noted that MSC 84 had also agreed to expand the existing work programme item to consider the proposal contained in document MSC 84/22/18 (Egypt), and increased the number of sessions needed to complete this work item to three sessions.

6.3 The Sub-Committee further considered document MSC 84/22/18 (Egypt) proposing that consideration should be given for the need to attach a floating capsule to the fixed one so as to minimize the search time and risks and reduce search and retrieval costs for the capsule.

6.4 The Sub-Committee noted that in document MSC 83/25/18 (India) had supported Egypt's proposal to modify VDR capsule release from its base and to provide an easy means to obtain information (hard disk). To retrieve the data from a sunken ship was not always feasible, therefore it was essential to incorporate an additional storage medium externally on the below deck unit of VDR and S-VDR on the bridge. The storage medium should be compatible with standard interfaces such as Ethernet, USB, Fire Wire, or equivalent and should be enclosed in a floatable water tight casing of bright colour with retro-reflective tape and carrying straps. The pull free data device should be so designed that the person on board when abandoning ship had only to pull the additional storage medium device and strap it round his neck.

6.5 The Sub-Committee considered document NAV 55/6 (Republic of Korea) suggesting that there was a need to amend the Performance Standards for VDR and S-VDR so as not to lose the stored information over the period before and after a subsequent incident, and proposing an amendment to the Performance Standards, which enabled copies to be made of that information through a saving process. In addition, the Republic of Korea was of opinion that some mandatory procedures should be established to perform the saving process on board ship and further proposed an associated amendment to SOLAS regulation V/20.

6.6 The Sub-Committee also considered document NAV 55/6/1 (Germany and the United Kingdom) suggesting that there was a need to amend the Performance Standards to cover data availability and quality issues to better enable the data to be used in the way intended by the Organization, namely for the investigation of accidents and incidents. These amendments were required to ensure that the pertinent data items available now as a result of advanced technologies were recorded and available to investigators in the most cost-effective manner following an accident or incident. The proposed amendments were not intended to be retrospective, and since according to SOLAS regulation V/20.2 the Performance Standard for S-VDRs (resolution MSC.163(78)) would not apply after 1 July 2010, no changes were proposed to the performance standards for S-VDRs.

6.7 The Sub-Committee further considered document NAV 55/6/2 (United States) proposing the addition of ship's heel angle to the list of required data items to be recorded by voyage data recorders.

6.8 There was a general discussion on the proposed amendments to the performance standards for Voyage Data Recorders. Delegations had concerns regarding following issues:

- .1 extension of the time for which data are retained;
- .2 post incident retrieval: fixed versus float free arrangements; and
- .3 the final recording medium.

Secondly, with respect to the proposal by the Republic of Korea for an amendment to SOLAS regulation V/20 to assist in casualty investigation, some delegations were of the view that a technical solution would be preferable, rather than putting a mandatory requirement on the master, as there was no guarantee against human error.

6.9 The Sub-Committee concurred that only the existing performance standards for VDRs (resolution A.861(20)) need to be amended as the proposed amendments are not intended to be retrospective. Secondly, since the Performance Standard for S-VDRs (resolution MSC.163(78)) would not apply after 1 July 2010, it was not necessary that any changes should be made to that standard. The delegation of the United Kingdom clarified that the amended performance standards would only apply to new ships.

6.10 The Sub-Committee further agreed that the annex to document NAV 55/6/1 should be used as the basic document by the Technical Working Group to develop the revised performance standards.

6.11 The Sub-Committee noted the information provided by the European Commission (NAV 55/INF.12) on the results of the research project, the European Maritime Data Management (EMDM) on amendments to existing VDR standards.

6.12 The Sub-Committee agreed to refer documents NAV 55/6, NAV 55/6/1, NAV 55/6/2, NAV 55/INF.12, MSC 83/25/4, MSC 83/25/8, MSC 83/25/9, MSC 83/25/18 and MSC 84/22/18 to the Technical Working Group to be established under agenda items 4, 6, 7, 8, 10, 20A (sub-item on Codes, Recommendations, Guidelines of non-mandatory instruments) and 20C (operation of BNWAS) for developing the revised performance standards for VDRs.

Report of the Technical Working Group

[6.13 Having received and considered the Technical Working Group's report (NAV 55/WP.4), the Sub-Committee (with reference to paragraphs 4.1 to 4.6 and annex 4), took action as summarized hereunder.

6.14 The Sub-Committee noted that the issues raised in documents MSC 83/25/4 (Germany), MSC 83/25/8 (Egypt), MSC 83/25/9 (Egypt), MSC 83/25/18 (India), MSC 84/22/18 (Egypt) and document NAV 55/INF.12 had been taken into account by Germany and the United Kingdom in their proposals set out in the annex to document NAV 55/6/1.

6.15 In considering document NAV 55/6/2, the Sub-Committee noted that the issue of concern for the United States was satisfactorily dealt with in the annex to document NAV 55/6/1.

6.16 The Sub-Committee observed that the Group had further considered document NAV 55/6 and noted that the Republic of Korea was of the view that, to assist in casualty investigation, mandatory procedures should be established to perform the saving process on board the ship after an accident had taken place through a proposed amendment to SOLAS regulation V/20. Some delegations were of the view that a technical solution would be preferable rather than putting a mandatory requirement on the master as proposed by the Republic of Korea. However, it was considered that whilst new installations could include a technical solution, that for existing VDRs the proposed amendment to SOLAS could be of assistance. However, some delegations expressed the view that in practise it might be very difficult for a master to attend to a VDR whilst handling the distress situation. The Sub-Committee noted that the Group was not able to agree on a recommendation to Plenary at this session and decided to request Member Governments to submit relevant proposals to NAV 56.

6.17 The Sub-Committee prepared draft text of revised performance standards for VDR (resolution A.861(20)), on the basis of the annex to document NAV 55/6/1, taking into account the proposal contained in document NAV 55/6. In preparing the draft text of revised performance standards, it was considered that:

- .1 justification, for instance by a cost/benefit analysis, was needed for the proposal to fit a float-free type capsule in addition to a fixed protected capsule (paragraph 5.1.3.1);

- .2 there was a need for a better description for the word “tampering” in paragraph 5.1.5.3;
- .3 testing requirements were inappropriate in a performance standard as suggested in paragraph 5.2.4;
- .4 with regard to the proposed changes for paragraph 5.3.3, possibly a longer period of time than 24 hours should be considered;
- .5 there will be a need for a standard for interconnection with ECDIS (paragraph 5.4.8);
- .6 information should be provided on the availability of electronic inclinometers (paragraph 5.4.18);
- .7 there will be a need for standards for interconnection with electronic log-books, etc. (paragraph 5.4.19); and

the Sub-Committee invited interested parties to submit additional information and/or proposals to the next session of the Sub-Committee on the above-mentioned issues.

6.18 The draft text of revised performance standards for VDR (resolution A.861(20)) is set out at annex ..., for further consideration by NAV 56.]

7 DEVELOPMENT OF PROCEDURES FOR UPDATING SHIPBORNE NAVIGATION AND COMMUNICATION EQUIPMENT

7.1 The Sub-Committee recalled that MSC 83 had considered document MSC 83/25/7 (Australia and the United Kingdom), proposing to develop, in view of the increasing complexity of processor-based electronic systems, formal procedures to address firmware, operating systems and software updates for shipborne navigation and communication systems and equipment, and agreed to include, in the work programmes of the NAV and COMSAR Sub-Committees, a high-priority item on “Development of procedures for updating shipborne navigation and communication equipment”, with two sessions needed to complete the item, and assigned the Sub-Committee as a coordinator.

7.2 The Sub-Committee also recalled that, at COMSAR 12, Australia and the United Kingdom had submitted an information document (COMSAR 12/INF.10) regarding the

development of formal procedures addressing software upgrades for communications and navigation systems.

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

7.4 The Sub-Committee agreed to refer document NAV 55/7 to the Technical Working Group to be established under agenda items 4, 6, 7, 8, 10 and 20 (sub-item on Codes, Recommendations, Guidelines of non-mandatory instruments), for developing a draft MSC circular on Guidance for updating shipborne navigation and communication equipment for review/comments by COMSAR 14, final review by NAV 56 and approval by MSC 88.

Report of the Technical Working Group

[7.5 Having received and considered the Technical Working Group's report (NAV 55/WP.4), the Sub-Committee (with reference to paragraph 5.1 and annex 5), took action as summarized hereunder.

7.6 The Sub-Committee endorsed the draft MSC circular on Guidance on procedures for updating shipborne navigation and communication equipment, as set out at annex ..., for review/comments by COMSAR 14 and a final review by NAV 56 prior to approval by MSC 88.]

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

8.1 The Sub-Committee recalled that MSC 82 had extended the target completion date of this agenda item to 2009.

Outcome of the fifth meeting of the Joint IMO/ITU Experts Group on Maritime radiocommunication matters

8.2 The Sub-Committee noted the information provided in document NAV 55/INF.13 (Secretariat) on the outcome of the fifth meeting of the Joint IMO/ITU Experts Group on Maritime radiocommunication matters, which took place from 23 to 25 June 2009, and in particular:

- .1 the annex of the document containing a draft liaison statement to ITU on the outcome of deliberations regarding satellite detection of AIS in the Committee; and
- .2 on the further development of the draft IMO position on relevant WRC-11 agenda items.

Satellite detection of AIS

8.3 The Sub-Committee recalled that NAV 54 had considered documents NAV 54/9/1, NAV 54/INF.2 and NAV 54/INF.10 (Secretariat) relating to the issue of improved satellite detection of AIS. NAV 54 was of the opinion that it was premature to further address the issue of satellite detection of AIS and agreed to:

- .1 bring the matter to the attention of the Committee with the aim of getting a clear policy direction; and
- .2 send an interim liaison statement to ITU explaining that further discussion in IMO was needed before any guidance on this issue could be given; the liaison statement should be sent as soon as possible in order to inform ITU-R WP5B in time for its next meeting to be held in October 2008.

The Committee was invited to take a clear decision on whether it was supporting the issue of satellite detection of AIS.

8.4 The Sub-Committee noted that MSC 85 had considered document MSC 85/11/1 (Secretariat) and noted also that several Member States were conducting research and development efforts to determine the feasibility of using AIS receiving capability on low earth orbit (LEO) satellites and high altitude, long endurance (HALE) airships or balloons. The reasons brought forward for satellite detection of AIS were, *inter alia*:

- .1 observation of maritime activity;
- .2 detection, monitoring and surveillance of global maritime shipping;
- .3 ship tracking and other navigational activities;
- .4 satellite based oil spill detection services;

- .5 fisheries monitoring; and
- .6 provision of vessel information critical to maritime safety and security.

8.5 The Sub-Committee noted further that, in considering whether to support the issue of satellite detection of AIS, MSC 85 had noted that:

- .1 in principle, everyone who would be able to receive these signals could use the information collected, also for commercial activities;
- .2 there might be a need to subsequently specify modifications to the shipborne AIS Class A equipment; and
- .3 there was a need for separate frequencies for satellite detection of AIS, which should be selected within the available VHF frequency band for the maritime service and the frequencies under consideration were the frequencies adjacent to the GMDSS distress Channel 16.

Several delegations (Sweden, the United States, France, China, Greece and ICS (observer)) spoke on the issue and MSC 85 had decided to postpone discussion of the issue to its next session and invited interested delegations to submit relevant proposals to MSC 86 for consideration under the agenda item on “Any other business”.

8.6 The Sub-Committee also noted that MSC 86 (MSC 86/26, paragraphs 25.4 to 25.9) had considered the issue on the basis of document MSC 86/25/1 (France) and that the Chairman, in summing up the debate, had outlined the following points:

- .1 considerable concerns had been raised, which should be conveyed to the relevant bodies in ITU, to be taken into account in their further studies, namely:
 - .1.1 the relation with the implementation of the LRIT system;
 - .1.2 integrity and confidentiality issues;
 - .1.3 security issues;
 - .1.4 collection and dissemination of data;
 - .1.5 technical issues, such as the risk of interference to critical existing maritime radiocommunication services and the need for changes to the current AIS Class A equipment; and

- .1.6 global policy issues, including the view that all countries should benefit from the development and implementation of this system;
 - .2 there was general support for the continuation of studies under the framework of ITU; and
 - .3 IMO should not make any commitment at this stage, awaiting the outcome of studies.
- 8.7 The Sub-Committee noted that MSC 86 had further recognized that:
- .1 being part of a WRC agenda item, the studies on satellite detection of AIS were covered under the work programme of the COMSAR Sub-Committee;
 - .2 e-navigation was already an item on the work programme of the NAV and COMSAR Sub-Committees;
 - .3 the NAV Sub-Committee was the competent body for AIS, and ITU matters were already on its work programme; and
 - .4 therefore no new work programme item was necessary to study the satellite detection of AIS as it was already covered by the respective work programme items of both Sub-Committees.
- 8.8 The Sub-Committee further noted that it was expected to send a liaison statement to ITU, informing them of the outcome of deliberations on this matter by the Committee.
- 8.9 The Sub-Committee noted that in November 2008, a liaison statement on this matter was received from ITU and that further discussions on this issue took place at the last meeting of ITU WP 5B in May this year.
- 8.10 The Sub-Committee considered documents NAV 55/8 and NAV 55/8/6 (Secretariat).containing a liaison statement from the meeting of ITU-R Working Party 5B which took place from 29 October to 7 November 2008, to IMO (COMSAR and NAV) and IALA concerning improved satellite detection of AIS and information on the further development of the Preliminary draft new report ITU-R M. [SAT-AIS] on Improved satellite detection of AIS at ITU WP5B's meeting from 19 to 28 May 2009.

8.11 The Sub-Committee agreed to refer documents NAV 55/8 and NAV 55/8/6 to the Technical Working Group established under agenda item 4, for detailed consideration and the development of a liaison statement on this matter to ITU, taking into account the annex of document NAV 55/INF.13.

Other AIS issues

Impact of resolution MEPC.118(52) upon existing AIS shipboard installations

8.12 The Sub-Committee recalled that NAV 53 had 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.

8.13 The Sub-Committee recalled further that, on the need for possible modification of hardware of all AIS units following the entry into force of the 2004 amendments to MARPOL Annex II on 1 January 2007, NAV 54, considering that the number of categories to be reported was the same (4), had agreed that it would be sufficient to revise the reference documents, annex 2 of SN/Circ.227 and ITU-R Recommendation M.1371-3, to reflect the new classification letters corresponding to the digits, without any change to the hardware.

8.14 The Sub-Committee recalled also that NAV 54 had finalized a draft liaison statement to ITU, IEC and IALA, (NAV 54/25, annex 10), informing them of the change to hazard or pollutant categories and inviting them to note this in any future revision of their documentation.

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

8.16 The Sub-Committee also noted that IALA had submitted a document (NAV 55/10/1) under agenda item 10 on AIS issues relating to the underlying causes of incorrect AIS transmissions, which would be referred to the Technical Working Group for consideration under this sub-agenda item (paragraph 10.12 refers).

8.17 The Sub-Committee agreed to refer document NAV 55/8/5 to the Technical Working Group, to be established under agenda item 4, for detailed consideration.

Status of the current VHF frequencies in use for AIS

8.18 The Sub-Committee considered document NAV 55/8/1 (Secretariat) containing a liaison statement to ITU prepared by COMSAR 13 concerning the non-status of the two existing AIS frequencies used for Safety of Navigation, requesting ITU to evaluate the appropriate designation of the two AIS frequencies within the ITU Radio Regulations, as instructed, which had been forwarded to ITU on 4 February 2009. WP 5B in May 2009 had considered the above liaison statement sent by COMSAR 13 and was of the view that the chance of getting an exclusive allocation in the Table of allocations was very slim, since the frequencies were in several countries in use for other (land mobile) purposes. It was further considered that a footnote in Appendix 18 would be a possibility, but might be difficult to agree upon at a WRC, for the same reasons as mentioned above. WP 5B had further noted that AIS-SART was listed in Appendix 15, which only listed frequencies for distress and safety communications for the GMDSS and that only the AIS-SART function of AIS was part of the GMDSS. Initial consideration of the issues indicated that the advice to IMO would most likely be that should IMO wish to consider adding further functions of AIS into the GMDSS, it would be possible to modify the annotations on the use of the frequencies AIS1 and AIS2 given in Appendix 15 at some future WRC. The procedure for this involved agreement of an agenda item at the preceding Conference, for instance an agenda item at WRC-16 would be agreed at WRC-11.

8.19 The Sub-Committee noted that MSC 86, having endorsed this action of COMSAR 13, instructed NAV 55 to consider issues related to the status of the current AIS frequencies and advise COMSAR 14 accordingly.

8.20 The Sub-Committee agreed to refer document NAV 55/8/1 to the Technical Working Group, to be established under agenda item 4, for detailed consideration.

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

8.21 The Sub-Committee considered document NAV 55/8/2 (Secretariat) concerning the issue of future spectrum requirement with respect to e-navigation and providing an overview of the discussions that took place at COMSAR 13. With respect to e-navigation, COMSAR 13 had agreed to request the Sub-Committee to consider this issue of future spectrum requirement and invited the Committee to instruct NAV 55 accordingly and advise COMSAR 14. MSC 86 had endorsed this request and the Sub-Committee recalled that it had requested its e-navigation working group to consider this matter (paragraphs 11.4 and 11.6 refer).

8.22 The Sub-Committee considered document NAV 55/8/3 (IALA) suggesting studies on appropriate provisions within the Radio Regulations by ITU-R WP5B and within the framework of the preparation of the WRC-11, and taking into account current and future e-navigation requirements for maritime navigation and communication systems.

8.23 The Sub-Committee considered document NAV 55/8/4 (Secretariat) providing details on the WP 5B consideration of the liaison statement by IALA, concerning the need to study future digital communication systems in conjunction with WRC-11 Agenda item 1.10 and preparation of a liaison statement back to IALA and IMO.

8.24 The Sub-Committee agreed to refer documents NAV 55/8/2, NAV 55/8/3 and NAV 55/8/4 to the Technical Working Group, to be established under agenda item 4, for detailed consideration.

Report of the Technical Working Group

[8.25 Having received and considered the Technical Working Group's report (NAV 55/WP.4), the Sub-Committee (with reference to paragraphs 6.1 to 6.8 and annex 6), took action as summarized hereunder.

Satellite detection of AIS

8.26 The Sub-Committee noted the Preliminary draft new report ITU-R M. [SAT-AIS] on Improved satellite detection of AIS and approved the draft liaison statement on this matter to ITU-R as set out at annex ... and instructed the Secretariat to convey it to ITU-R and invited the Committee to endorse this action.

Other AIS issues

Preliminary draft revision of Recommendation ITU-R M.1371-3

8.27 The Sub-Committee noted the liaison statement from Working Party 5B on the preliminary draft revision of Recommendation ITU-R M.1371-3 to IALA, IMO, CIRM and IEC TC 80.

Status of the current VHF frequencies in use for AIS

8.28 The Sub-Committee agreed with the statement from COMSAR that the safety functions of AIS should be recognized by the ITU in the Radio Regulations which currently limit the safety

functions only to the AIS-SART. However, the Sub-Committee noted that the initial consideration by ITU-R had concluded that any regulatory change to the status of the AIS frequencies would be very difficult to achieve. The Sub-Committee instructed the Secretariat to inform COMSAR 14 on the outcome of the discussion on this matter.

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

8.29 The Sub-Committee noted that, with respect to e-navigation, COMSAR 13 had agreed to request the Sub-Committee to consider this issue of future spectrum requirement in the light of the development of the draft IMO position on WRC-11, agenda item 1.10.

8.30 The Sub-Committee noted document NAV 55/8/3 (IALA) concerning IALA's proposal to ITU, suggesting studies on appropriate provisions within the Radio Regulations by ITU-R WP 5B regarding current and future e-navigation requirements for maritime navigation and communication systems. The Sub-Committee further noted that ITU-R WP 5B had considered a liaison statement of IALA, concerning the need to study future digital communication systems in conjunction with WRC-11 Agenda item 1.10, which provided basically identical information as submitted for consideration in document NAV 55/8/3. WP 5B had prepared a liaison statement back to IALA and IMO, as annexed to document NAV 55/8/4 (Secretariat).

8.31 The Sub-Committee agreed that:

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

8.32 The Sub-Committee further agreed that the points mentioned in the paragraph above, would be sufficient at this stage to forward to COMSAR 14. However, the Sub-Committee noted that ITU would require a proposal for an agenda item for the next WRC, to be submitted to WRC-11. It was further noted that the next WRC was expected to be held in 2016 and that

proposals could only be submitted by Member States. In order to advise Member States in time on IMO's position on a required agenda item for WRC 2016, IMO should define this at COMSAR 15 (first quarter 2011) at the latest (COMSAR 14/4, annex 6 refers).

8.33 The Sub-Committee instructed the Secretariat to inform COMSAR 14 on the outcome of the discussion on this matter.

8.34 The Sub-Committee agreed that there was a need of extension of the work programme items "ITU matters" and "Radiocommunication ITU-R Study Group matters " to 2011 and that justification was given by the expected ongoing liaison with ITU on AIS issues. Accordingly, the Sub-Committee invited the Committee to extend the target completion date for these items to 2011 (paragraph 18.5.2.1.1 and 18.5.2.1.2 refers).]

9 CODE OF CONDUCT DURING DEMONSTRATIONS/CAMPAIGNS AGAINST SHIPS ON HIGH SEAS

9.1 The Sub-Committee recalled that following consideration of document MSC 82/21/8 in which Japan, being concerned with serious accidents, including collisions of ships, when non-State activist groups protesting against certain maritime activities had conducted direct actions against ships, proposed to establish a code of conduct for demonstrators/campaigners, which would provide a recommendatory set of guidelines for demonstrators and related authorities to ensure and promote safety of crew, maintain the order of maritime navigation and preserve the right and opportunity for a peaceful demonstration, MSC 82 had agreed to include, in the NAV and FSI Sub-Committees' work programmes, a high-priority item on "Code of conduct during demonstrations/campaigns against ships on high seas", with two sessions needed to complete the item, and assigned the NAV Sub-Committee as a coordinator.

9.2 The Sub-Committee also recalled that NAV 54 had a significant debate on the issue and subsequently agreed to the provisional draft MSC resolution on Assuring safety during demonstrations, protests, or confrontations on the high seas, as work in progress, and invited the FSI Sub-Committee to consider the text for advice, with the aim of finalization of the text of the draft MSC resolution at NAV 55.

9.3 The Sub-Committee noted that FSI 17, being advised that NAV 54 had instead developed and agreed to the above provisional draft MSC resolution as work in progress and had invited the FSI Sub-Committee to consider the text for advice, with the aim of finalization of the text

at NAV 55, agreed to the draft MSC resolution as presented in document FSI 17/16, which had been backed by MSC 86.

9.4 The Sub-Committee considered document NAV 55/9 (Greenpeace International) providing comments on the provisional draft MSC resolution in particular, proposing the inclusion of explicit references to specific international human rights instruments relevant to legitimate and peaceful forms of protest.

9.5 The Sub-Committee noted that there had been no intervention at FSI 17 or MSC 86 on this issue by Greenpeace International. However, now Greenpeace International wished to amend the third preambular paragraph, so as to make an explicit reference to the 1948 Universal Declaration of Human Rights and the 1966 International Covenants on Human Rights.

9.6 There was overwhelming support in the Sub-Committee to forward the draft MSC resolution on Assuring safety during demonstrations, protests, or confrontations on the high seas, as prepared by NAV 54 and endorsed by FSI 17 without any change.

9.7 The International Whaling Commission (IWC) observer noted that, from an IWC perspective, the matter arose as a result of the legal (although within and outside the IWC very controversial) activity of special permit lethal research programmes. In particular, it related to the special permit whaling of Japan in the Southern Ocean. All members of the IWC, despite their often very strong disagreements over the special permit whaling, supported the right to legitimate and peaceful protest. However, they were equally all extremely concerned at the dangerous confrontations between Japanese vessels and a vessel of the Sea Shepherd Conservation Society over recent years. These activities represented not only a severe threat against human life and property, particularly given the limited search and rescue capability in such remote areas, but also could have serious environmental consequences. As a result the IWC passed by consensus formal resolutions condemning such dangerous protests in 2006 and 2007 as well as agreeing a unanimous statement in 2008, calling on the Sea Shepherd Conservation Society to refrain from dangerous actions jeopardising safety at sea and also calling on all vessels and crews involved to exercise restraint. Despite this, such activities continued and, at IWC's recently completed Annual Meeting in Madeira, the Commission reaffirmed its previous position and asked that these serious concerns of their 86 member Governments be brought to the attention of IMO as the United Nations body responsible for safety of navigation.

9.8 The delegation of Japan commented in relation to the concerns of all IWC members about dangerous activities taken by the Sea Shepherd Conservation Society against Japanese whale research vessels. Dangerous activities by the Sea Shepherd Conservation Society had been repeated despite calls by IWC members asking them to refrain from conducting these activities, which were in Japan's opinion similar to acts of piracy. As was explained by the IWC representative, serious concerns had been raised by all IWC Contracting Governments, irrespective of their positions on whaling, and it was agreed to ask IMO for close co-operation, with a view to securing safety at sea during research. Japan believed that IMO members should take into account the concerns and wishes shown by IWC members, and show willingness to cooperate with IWC for securing the safety of seafarers and vessels engaged in legitimate activities. With this in mind, whilst Japan had no intention to block the approval of the draft MSC resolution here at the current session, Japan announced its intention to propose a slight modification at MSC 87 taking into account the very serious concerns shown by IWC members.

9.9 The delegation of Australia noted that the Secretary of the International Whaling Commission had sent a letter to the Secretary-General of the Organization on the matter currently before the Sub-Committee and on the subject of safety of sea. Australia pointed out that IWC Contracting Governments had not been consulted in the drafting of this letter. Australia had some concerns with this letter, in particular, the letter noted Japan's ongoing programmes in both the Southern Ocean and North Pacific involving the killing of whales, stating that "this type of research was legal but it was controversial". Australia was concerned that such a statement was made purportedly on behalf of the Commission and that it clearly inferred that the whaling conducted by Japan was lawful under the Convention. Many IWC members, including Australia, had expressed the view that the whaling undertaken by Japan, far from being "lawful", was in fact contrary to Japan's obligations under the ICRW and therefore unlawful.

9.10 In addition, the Sub-Committee noted that during C102 (29 June to 3 July 2009), whilst undertaking a review of non-governmental organizations (NGOs) in consultative status with IMO, and following an intervention by the United Kingdom in connection with an incident involving Greenpeace activists who boarded a coal carrier ship off the Kingsnorth power station in Kent earlier this year, one delegation had recalled that the NAV Sub-Committee was currently examining a draft resolution concerning demonstrations on the high seas and suggested that the scope of the resolution be extended so that it applied to demonstrations, not only on high seas, but also within territorial waters or ports. This would send a strong message to all NGOs that safety of life and property at sea must be respected.

9.11 The Sub-Committee considered the matter and was of the view that there was no need for the draft MSC resolution to be extended to territorial waters or ports, since there were other appropriate national instruments in place.

9.12 Accordingly, the Sub-Committee agreed the final text of the draft MSC resolution on Assuring safety during demonstrations, protests, or confrontations on the high seas, as set out in annex ..., for submission to MSC 87 for adoption.

9.13 The Committee was consequently invited to delete the item “Code of conduct during demonstrations/campaigns against ships on high seas”, from the Sub-Committee’s work programme, as the work on this item had been completed.

10 MEASURES TO MINIMIZE INCORRECT DATA TRANSMISSIONS BY AIS EQUIPMENT

10.1 The Sub-Committee recalled that MSC 82, following consideration of document MSC 82/21/10 (Egypt) proposing to develop a scheme to minimize incorrect transmissions by the ship’s AIS equipment, had agreed to include a corresponding high-priority item in the Sub-Committee’s work programme, with two sessions needed to complete the item, in co-operation with the FSI (with regard to port State control-related matters) and COMSAR Sub-Committees, as necessary. Member Governments and international organizations were invited to provide the pertinent information to the sub-committees concerned.

10.2 The Sub-Committee recalled also that NAV 54 had considered document MSC 82/21/10 (Egypt) suggesting a method to ensure that messages sent by AIS equipment from ships were more accurate. The IALA observer reminded the Sub-Committee that IALA had submitted document NAV 53/INF.10 relating to AIS incorrect transmissions. The IALA observer also recalled in this context recently adopted MSC.1/Circ.1252 on Guidelines on annual testing of the Automatic Identification System (AIS) aimed at minimizing incorrect data transmissions by AIS equipment.

10.3 The Sub-Committee recalled further that NAV 54, noting that no other substantial proposals had been submitted on this issue for consideration, agreed to defer further consideration to NAV 55, inviting members to submit suitable proposals for consideration.

10.4 The Sub-Committee observed that MSC 85 had noted that FSI 16 could not support the proposal to amend SOLAS regulation V/18 to introduce provisions dealing with the annual

testing of the AIS. Having considered the inspection mechanism of AIS equipment, as developed by the FSI Sub-Committee through the Guidelines on annual testing of AIS (MSC.1/Circ.1252) and the draft revised Survey Guidelines under the HSSC which contained the testing of AIS, in a manner consistent with the inspection of other electronic equipment carried on board ships, MSC 85 had subsequently agreed that a complementary review of the issue of annual testing of AIS might be relevant in the specific context of incorrect AIS data transmissions and instructed NAV 55 to consider the matter under this agenda item, taking into account the information contained in document MSC 83/15/3, for reporting to MSC 87.

10.5 The Sub-Committee considered document MSC 83/15/3 (Republic of Korea) commenting on the draft Revised Survey Guidelines under the Harmonized System of Survey and Certification (HSSC), as agreed by FSI 15 and for approval by MSC 83, concerning the need for requirements under SOLAS for the inspection and survey of the Automatic Identification System (AIS) and proposing a draft amendment to SOLAS regulation V/18 for the annual testing of the AIS.

10.6 The Sub-Committee also considered document NAV 55/10 (Norway) proposing a mandatory initial and annual testing of AIS and that installation survey and testing and annual surveys of the AIS equipment were made mandatory through SOLAS and/or the Harmonized System of Survey and Certification, 2007 (resolution A.997(25)). Norway was of the view that the survey should be performed by a qualified radio surveyor together with the annual radio inspection. In addition, a safety equipment certificate should not be renewed or endorsed, unless an AIS report, issued by a radio surveyor, was available and valid in accordance with circular MSC.1/Circ.1252 and the safety equipment certificate surveyor had carried out a functioning test against a VTS or a ship.

10.7 The ICS observer stated that whilst Norway's concern was justified, the compromise solution reached at FSI 16 should not be disregarded. AIS static data faults could be detected by a radio surveyor. The ICS observer further noted that AIS voyage related and dynamic information could be tested for accuracy by shipboard personnel and verified by VTS personnel, thus eliminating the need for a certified test. Therefore, ICS was not in favour of the Norwegian proposal.

10.8 The majority of the delegations who spoke on the issue were in favour of supporting the Norwegian proposal for mandatory initial and annual testing of AIS equipment, whilst a small minority were in favour of the ICS position.

10.9 The IACS observer cautioned against linking the results of the AIS survey with the issuance of the safety equipment certificate.

10.10 The Sub-Committee agreed to refer document NAV 55/10 and MSC.1/Circ.1252 to the Technical Working Group established under agenda items 4, 6, 7, 8, 10, 20A (Codes and recommendations) and 20C (Operation of BNWAS).

10.11 The Sub-Committee further considered document NAV 55/10/1 (IALA) proposing amendments to the technical clarification of ITU Recommendation ITU-R M.1371-1, Edition 1.5 and agreed to refer it to the Technical Working Group established under agenda items 4, 6, 7, 8, 10, 20A and 20C for review and appropriate recommendations for consideration by Plenary.

[Report of the Technical Working Group]

10.12 Having received and considered the Technical Working Group's report (NAV 55/WP.4), the Sub-Committee (with reference to paragraphs 7.1 to 7.3 and annex 7), took action as summarized hereunder.

Proposed amendment to SOLAS regulation V/18

10.13 The Sub-Committee endorsed the draft resolution on proposed amendments to the 1974 SOLAS Convention, as amended, proposing a new regulation 18-9 to be added after the existing regulation 18-8, as set out at annex ..., with a view to approval by MSC 87 and adoption by MSC 88.

10.14 With respect to the linkages between the annual radio inspection of AIS and the renewal or endorsement of a safety equipment certificate, the Sub-Committee agreed that by not mentioning the expression "radio inspection" in the proposed new regulation 18-9, the requirement would be more general and less confusing. The Sub-Committee also noted that several Members already had national requirements for annual inspection of AIS equipment, which in practise had not led to any difficulties.

Navigation Status parameter of AIS Messages 1 to 3

10.15 The Sub-Committee noted concerns expressed by several delegations with regard to the descriptions proposed. It was also noted that there were differences in the terminology and philosophy used in ITU-R Recommendation 1371-3 and the COLREGs. IALA was invited to

take the comments made by the Sub-Committee into account when preparing their submission to ITU on this issue.

10.16 The Committee was invited to delete the item “Measures to minimize incorrect data transmissions by AIS equipment” from the Sub-Committee’s work programme, as the work on this item had been completed (paragraph 18.5.1.1.3).]

11 DEVELOPMENT OF AN E-NAVIGATION STRATEGY IMPLEMENTATION PLAN

11.1 The Sub-Committee noted that MSC 85 had approved the Strategy for the development and implementation of e-navigation (the Strategy) and noted that it had been finalized in co-operation with the COMSAR Sub-Committee over a period of two years (2006 to 2008) and was sufficiently developed and detailed for implementation. Relevant input had also been provided by the industry and other relevant organizations, e.g., IALA and IHO.

11.2 The Sub-Committee also noted that MSC 85 had subsequently also approved the Framework along with a time frame for the implementation process for the Strategy, along with a time frame and requested other international organizations to participate in the implementation of e-navigation.

11.3 The Sub-Committee further noted that MSC 85 had also endorsed the Sub-Committee’s decision that the Chairmen along with the Secretaries of the COMSAR, NAV and STW Sub-Committees should jointly develop a coordinated approach to implement the proposed e-navigation strategy.

11.4 The Sub-Committee further noted that COMSAR 13 had endorsed the view of IHO (COMSAR 13/4/2/Rev.1) that there might be a requirement for additional spectrum to be allocated for broadcasting of more than changes to port security levels in major ports and coastal waters and agreed that the band 495-505 kHz could be of interest to IMO for this purpose. With respect to e-navigation, COMSAR 13 had agreed to request the NAV Sub-Committee to consider this issue of future spectrum requirement and invited the Committee to instruct the Sub-Committee accordingly and advise COMSAR 14.

11.5 The Sub-Committee further noted that MSC 86, having considered document MSC 86/23/4 (Secretariat) proposing a joint plan of work for the COMSAR, NAV and STW Sub-Committees for the period 2009-2012 for the implementation of the Strategy, had agreed to

remove the square brackets around the IHO participation in the column “External outputs” of the annex to the above document, and approved the joint plan for NAV 55 to set in motion the coordinated and planned development of an e-navigation strategy implementation plan, in cooperation with the COMSAR and STW Sub-Committees. In addition, the Committee had noted with appreciation the information provided by the IHO and IALA observers regarding their ongoing work to support the implementation of the Strategy and that IALA would be submitting reports to the respective sessions of the COMSAR and NAV Sub-Committees on the matter.

11.6 The Sub-Committee observed that MSC 86 had subsequently instructed NAV 55 to:

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

11.7 The Sub-Committee also recalled the Secretary-General’s opening remarks underlining the need to commence work and give due diligence on the development of an e-navigation strategy implementation plan.

11.8 The Sub-Committee noted with interest the information provided by IHO (NAV 55/11), in line with the Sub-Committee request to IHO, at its fifty-fourth session, on the progress made in world-wide ENC coverage based on available data as of 27 April 2009.

11.9 The ICS observer thanked IHO for the information provided and, referring to ICS’s definition of “sufficient ENC availability” which was very similar to the IHO definition, being concerned there would be sufficient ENC coverage world-wide to support mandatory carriage of ECDIS, requested IHO to provide by NAV 57 information to that end.

11.10 The IHO observer stated that IHO would be providing information on the status of world-wide ENC coverage to NAV 56 and NAV 57.

11.11 The Sub-Committee considered document NAV 55/11/1 (IALA) providing a progress report on IALA’s e-navigation work. In addition, IALA also informed the Sub-Committee that the organization was working on four aspects of e-navigation within defined parameters. These

included user needs, architecture shore-side (2009), initial Gap-analysis (shore-side) 2010 and full 2011 and cost benefit analysis (shore-side 2011).

11.12 The Sub-Committee agreed to refer document NAV 55/11/1 to the e-navigation Working Group for consideration and advice.

11.13 The Sub-Committee considered document NAV 55/11/2 (France) providing proposals for a policy of (satellite detected) AIS data use. The purpose was to define a legal frame to ensure controlled use of AIS data.

11.14 In this context the Sub-Committee noted that MSC 86 had considered a document by France (MSC 86/25/1) and discussed the matter in Plenary and its outcome was detailed in document NAV 55/2/2/, annex 1, which had already been addressed under agenda item 8 – ITU matters including radiocommunications ITU-R Study Group matters (see paragraph 8...).

11.15 The delegation of the United States, stated that the document raised many serious policy and legal concerns involved in what was known as “satellite reception of AIS”, which had eventually to be solved. While conceptually, the United States might eventually be able to support some of France’s statements, it raised procedural concerns, insofar as it proposed that the NAV Sub-Committee should request the Committee to establish an ad hoc working group on AIS satellite detected data use, which would draw proposals for a policy of AIS data use and its legal framework. Noting that NAV was a technical body which might act only on the matters referred to it by its parent Committee, the United States viewed France’s suggestion as a new work programme item. The Sub-Committee could not request its parent Committee to establish a new work programme item. As NAV 53 had confirmed, (NAV 53/26, paragraph 3.56) only SOLAS Contracting Governments could propose new work items for the Committee to approve in accordance with the relevant Guidelines. Furthermore, the United States felt that any discussion of the policy and legal issues raised by France, while they were serious issues that unquestionably should be dealt with before the Organization was ready to establish a policy on satellite detection of AIS, were fundamentally within the province of the Committee to discuss and decide, and not this Sub-Committee.

The United States was also concerned with the suggestion that “only maritime authorities should have the use of raw satellite data and the authority to pick up the signals in their countries”. Perhaps it was not the function of this document to define the term “maritime authorities” in the context of this statement, but left undefined, and in stating that only such authorities might have

access, it presented serious legal and policy issues that were beyond the remit and the expertise of this Sub-Committee, as it was a technical body with particular expertise in navigation issues, not the legal and policy issues France had raised.

11.16 The delegation of Greece reserved, in principle, the position on the issue of satellite detected AIS, since it believed that the necessity of this system had not yet been established sufficiently compared to the LRIT system which was already being set up globally. The satellite detected AIS technology seemed to be competitive, rather than supplemental, to the LRIT system. Furthermore, Greece pointed out the danger of uncontrolled receipt and use of AIS information. In this respect, the Greek delegation was not objecting to a further elaboration of the technological potentials of satellite AIS detection, but believed that the Sub-Committee should not be bound by any decision for implementation of this system, until any interrelation with respect to the LRIT system was well documented and analyzed and all legal aspects related to the dissemination and use of the information had been resolved.

11.17 The IALA observer recalled that AIS detection by satellite was a fact today, and it worked well within the present configuration of AIS. IALA also expressed the opinion that LRIT and AIS Satellite were complementary for the years to come and explained the need for national Authorities to have access to the AIS information, outside their A1 area, without depending only on commercial interests. This was the reason why IALA had launched a demonstration project ("IALA-NET") to test a global system of exchange of AIS information between national authorities.

11.18 The Sub-Committee considered document NAV 55/11/3 complemented by information in document NAV 55/INF.9 (Germany) providing the results of a worldwide survey conducted by Germany to determine detailed e-navigation user needs. The questionnaire used for the survey was developed based on the high-level user needs specified in document NAV 54/25. The survey focused primarily on onboard user needs.

11.19 The Sub-Committee considered document NAV 55/11/4 (United Kingdom) illustrating an approach to developing and mapping e-navigation user needs, taking MSI as an example. Developing e-navigation user requirements was a highly complex exercise that required the commitment of resources and the involvement of key stakeholders. A systematic approach needed to be taken for this activity, boundaries had to be set, and a formalised "mapping technique" to track information flows, terminology and responsibilities was highly desirable.

The improved application of MSI onboard vessels had been clearly identified as a user need by mariners, and work on this issue under the agenda of e-navigation should continue.

11.20 The Sub-Committee agreed to refer documents NAV 55/11/3 and NAV 55/11/4 to the e-navigation Working Group for consideration and advice.

11.21 The Sub-Committee noted with interest the information provided by CIRM (NAV 55/INF.4) on the reasons behind setting up a new working group and how it intended to support IMO in the development of e-navigation

11.22 The Sub-Committee noted with interest the information provided by IFSMA (NAV 55/INF.8) on their work done together with the Nautical Institute over the last three years working with mariners to educate them as to the concept of e-navigation, and then to listen and understand their needs, desires and concerns. The research had indicated that most mariners were initially generally unaware of the term “e-navigation” and fewer still knew anything about the developments within this IMO work programme. The document summarized the most common responses from mariners as to how current systems could be made better and what future improvements would be beneficial. Due to the *ad hoc* method of capturing these user needs, and the wide diversity of mariners and ship types, no prioritization of these needs should be assumed.

11.23 The Sub-Committee agreed to refer documents NAV 55/INF.8 and NAV 55/INF.9 to the e-navigation Working Group for consideration and advice.

Establishing e-navigation Working Group

11.24 After preliminary discussion, as reported in paragraphs 11.1 to 11.20 above, the Sub-Committee re-established the e-navigation Working Group and instructed it to consider the relevant documents submitted under agenda item 11, namely, NAV 55/11/1 (IALA), NAV 55/11/3 (Germany), NAV 55/11/4 (United Kingdom), NAV 55/INF.8 (IFSMA) and NAV 55/INF.9 (Germany) including documents NAV 53/13, MSC 85/26, annexes 20 and 21, MSC 86/23/4 plus the outcome of COMSAR 13 and STW 40 including relevant outcome of MSC 86 and taking into account any decisions of, and comments and proposals made in Plenary, undertake the following tasks:

- .1 consider documents NAV 55/11/1, NAV 55/11/3, NAV 55/11/4, NAV 55/INF.8 and NAV 55/INF.9 and finalize the more detailed user needs;

- .2 consider document COMSAR 13/14 (paragraphs 4.60 to 4.64) and provide comments and recommendations regarding future spectrum requirement with respect to e-navigation;
- .3 consider document STW 40/14 (paragraph 7.11.8) and provide advice on the correct generic term to replace the terms “Decca” and “Loran”;
- .4 consider documents NAV 53/13 (paragraphs 12 to 16) and MSC 85/26 (annex 20, paragraph 9.7.2 and annex 21, paragraph 5) and develop the initial identification/outline of the system architecture;
- .5 consider document MSC 85/26 (annex 20, paragraph 9.7.3 and annex 21, paragraph 6) and undertake an initial gap analysis;
- .6 consider document MSC 85/26 (annex 21, paragraph 7) and develop/recommend an appropriate methodology for carrying out cost-benefit and risk analyses;
- .7 develop the terms of reference for a correspondence group to progress work intersessionally based on the joint plan of work approved by MSC 86 and report to COMSAR 14 and NAV 56;
- .8 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
- .9 submit a report to Plenary on Thursday, 30 July 2009 for consideration at Plenary.

Report of the E-Navigation Working Group

11.25 Having received and considered the e-navigation Working Group’s report (NAV 55/WP.5), the Sub-Committee (with reference to paragraphs 3.1 to 10.1, and annexes 1 and 2), took action as summarized hereunder.

USER NEEDS

[11.26 The Sub-Committee noted that the group had agreed that:

- .1 there should be harmonization between the shipboard and shore-based systems and procedures;
- .2 there should be coordination of inputs into the e-navigation development from shipboard and shore-based users, and other relevant bodies;
- .3 while the shipboard user needs had been identified to a more detailed level, the shore-based user needs required to be further developed; and
- .4 there was a need for an effective ship-shore inter-operability,

and that to facilitate the development of shore-side user needs, it was important that there should be a national coordination process between all relevant authorities/organizations which could identify all data providers and data users for a single window concept.

11.27 With regard to shore-based user needs, the Sub-Committee noted that the group had recognized that the development of user needs was a complex exercise and that the method to develop user needs based on functions as proposed by the United Kingdom (NAV 55/11/4) could be effectively used. Furthermore, the group had agreed that user needs were of paramount importance and the driving force for the e-navigation concept and that it was necessary to verify and update the user requirements as and when necessary during the implementation process of the Organization's e-navigation strategy.

11.28 The Sub-Committee noted that the group had agreed:

- .1 that information contained in documents NAV 55/11/3, NAV 55/INF.8 and NAV 55/INF.9 could form the basis for the preliminary shipboard user needs;
- .2 to review the preliminary detailed shipboard user needs, as developed by NAV 55 and update them as appropriate, and to consider priorities;
- .3 to develop detailed shore-based user needs, taking into account input provided by IALA and other relevant organizations, and to consider priorities; and

- .4 to identify functions and services to support the shipboard and shore-based user needs in a harmonized and holistic manner,

and invited IALA to provide the input and contributions of the various IALA Committees to the IMO Secretariat and the correspondence group.

11.29 The Sub-Committee also noted that the group had recognized that the results of relevant maritime projects, e.g., MarNIS and MEH, should be taken into account during the further development of the user needs. In this context, the European Commission observer had agreed to provide the correspondence group with the outcome of the EU/MarNIS project relating to Maritime Information Management which could be used as a background document for the development of shore-based user needs and architecture.

11.30 In light of the foregoing, the Sub-Committee:

- .1 noted the preliminary detailed shipboard user needs as set out in annex 1 of document NAV 55/WP.5;
- .2 agreed that the correspondence group should further progress the work intersessionally to:
 - .1 review the preliminary detailed shipboard user needs, as developed by NAV 55, and update them as appropriate, and to consider priorities;
 - .2 develop detailed shore-based user needs, taking into account input provided by IALA and other relevant organizations and to consider priorities;
 - .3 identify functions and services to support the shipboard and shore-based user needs in a harmonized and holistic manner; and
- .3 agreed that it would be necessary to verify and update the user needs, as and when necessary during the implementation process of the Organization's e-navigation strategy.

FUTURE SPECTRUM REQUIREMENT WITH RESPECT TO E-NAVIGATION

11.31 The Sub-Committee noted that the group had recalled that the Strategy for the development and implementation of e-navigation approved by MSC 85 provided for specific

high-level needs for robust communication and, data and system integrity. Although the details of these requirements had yet to be defined, it was anticipated that these requirements would be applied to VHF, HF and satellite technologies, as well as onboard networks capable of effectively integrating onboard e-navigation systems. Hence, there was a need for resiliency and integrity of such capacities. Furthermore, the work of COMSAR, ITU working party 5B, and the IEC TC80 and its continuous work on onboard digital interface networks to develop such communication capabilities was relevant.

11.32 In light of the foregoing, the Sub-Committee noted that the group had agreed that:

- .1 e-navigation would require a stable broadband VHF, HF and satellite data communications system;
- .2 maritime frequency spectrum should not be given up;
- .3 e-navigation would probably require additional frequency allocation which would be communicated to COMSAR 14 in due course for onward transmission to ITU; and
- .4 ITU should be informed accordingly,

and had advised the Technical working group of its deliberations and discussions on this matter with a view to providing consolidated advice to the Plenary.

CORRECT GENERIC TERM TO REPLACE THE TERMS “DECCA” AND “LORAN”

11.33 The Sub-Committee agreed that in light of rapid advancement of technology, it would be appropriate to use a more generic term and that the term “terrestrial electronic position fixing systems” should replace the terms “Decca” and “Loran” and instructed the Secretariat to inform STW 41 and the STW Intersessional Working Group accordingly.

INITIAL IDENTIFICATION/OUTLINE OF THE SYSTEM ARCHITECTURE

11.34 The Sub-Committee noted that the group had given preliminary consideration to initial identification/outline of the system architecture, taking into account information contained in documents NAV 53/13 (paragraphs 12 to 16) and MSC 85/26 (annex 20, paragraph 9.7.2 and annex 21, paragraph 5) and noted that there were no submissions to this session on this issue. Accordingly, the group had agreed that this work should be progressed further intersessionally by the correspondence group, taking into account the components identified at NAV 54, namely the

hardware, data, information, communications technology and software needed to meet the user needs and should be based on a modular and scalable concept. Furthermore, the system hardware and software should be backward compatible based on open architectures to allow scalability of functions according to the needs of different users and to cater to continued development and enhancement. When new systems were introduced that could not be made compatible, a suitable transitional period should be provided for, during which existing systems could continue to be in use. The group had also noted that development of system architecture had taken place in the interim period within IALA. Accordingly, the Sub-Committee invited IALA to provide the results of these developments to the correspondence group.

INITIAL GAP ANALYSIS

11.35 The Sub-Committee noted that the group had reviewed the preliminary gap analysis, as set out in annex 3 of document NAV 53/13 and noted that it could be a source of information for the correspondence group in preparing its more complete gap analysis, which included areas of business practices and holistic liability issues. To this end, the group had further noted that this preliminary gap analysis had been undertaken before the e-navigation strategy had been completed, and to some extent had been based on assumptions. Furthermore, the Sub-Committee, noting that in certain areas further development had taken place during the interim period within IHO and IALA, invited IALA and IHO to provide inputs to the correspondence group.

11.36 Finally, the group had agreed that the work should be progressed further intersessionally by the correspondence group in a holistic manner, taking into account the components agreed at MSC 85 and that the preliminary gap analysis, as set out in document NAV 53/13, annex 3 could be used as a background document for the proposed gap analysis.

COST-BENEFIT AND RISK ANALYSES

11.37 The Sub-Committee recalled that MSC 85 (MSC 85/26, annex 21, paragraph 7) had agreed that cost-benefit and risk analysis should be an integral part of the development of e-navigation and should be used to identify strategic decisions and, support decision-making on where and when certain functions need to be enabled. However, as there were no submissions to this session on this issue, the Sub-Committee agreed that this work should be progressed intersessionally by the correspondence group.

TERMS OF REFERENCE OF A CORRESPONDENCE GROUP

11.38 In order to maintain the proposed time schedule approved by MSC 86, the Sub-Committee established a correspondence group to progress the work intersessionally under the coordination of Norway* with the terms of reference as set out in annex 2 of document NAV 55/WP.5.]

Regional marine electronic highway in the East Asian seas

11.39 Recalling that at previous sessions, the Secretariat had updated the Sub-Committee on the key elements and expected outputs of the new project for the Development of a Regional Marine Electronic Highway (MEH) in the East Asian Seas including the progress made, the Sub-Committee noted that the MEH Demonstration Project was on its third year of implementation. Under the GEF/IBRD-funded project a hydrographic survey of a portion of the Traffic Separation Scheme (TSS) in the Straits of Malacca and Singapore covering approximately 621.3 square kilometres (14.38% of the total TSS area) would be carried out. Mobilization of survey equipment was currently underway following the signing of the survey contract between IMO and a private contractor on 27 May 2009, whilst the implementation of other activities such as the development of the Project website, the Environment Marine Information Overlays (E-MIOs) and the baseline information survey would take place after the survey.

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

12.1 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 layout 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.

*

Coordinator:

Mr. John Erik Hagen
Regional Director, Norwegian Coastal Administration
Norway
Tel: +4752733249
E-mail: john.erik.hagen@kystverket.no

12.2 The Sub-Committee also recalled that, at MSC 82 (MSC 82/24, paragraph 3.104.1), the expanded Committee adopted unanimously by resolution MSC.216(82) amendments to chapter II-2, Construction – Fire Protection, Fire Detection and Fire Extinction, for entry into force on 1 July 2010.

12.3 The Sub-Committee further recalled that NAV 53 had considered regulations II-2/3 and II-2/23 relating to safety centres on passenger ships in the context of the development of Guidelines on the layout and ergonomic design of safety centres on passenger ships. The CLIA observer had advised that some of their members were designing new ships based on the concept of the safety centre and further indicated that they would submit a paper on the issue for consideration by NAV 54.

12.4 NAV 54 noted that FP 52 had established a correspondence group, under the coordination of CLIA and instructed it to prepare a draft unified interpretation for consideration by FP 53. The Sub-Committee also noted that the CLIA observer was not present and therefore unable to provide additional information at this time. NAV 54 had therefore postponed further consideration to NAV 55, inviting Members to submit suitable proposals. Accordingly, the Committee was invited to extend the target completion date of this agenda item to 2009, which was agreed to.

12.5 The Sub-Committee also noted that FP 53 had considered the report of the correspondence group (FP 53/8) and, having approved it in general had:

- .1 concurred that the functionality of the safety centre systems in accordance with SOLAS regulation II-2/23.6 should remain, under all circumstances, in order to efficiently manage any envisaged emergency situation from the safety centre without distracting the navigation bridge team;
- .2 noted the draft onboard functional safety centre requirements;
- .3 noted the group's discussion concerning the concept and meaning of the term "continuously manned" and the functional requirements for manning a safety centre;
- .4 noted the proposed interpretations of "continuously manned safety centre";

- .5 noted the diagrams provided to indicate which arrangements of the safety centre may or may not be considered to be part of the bridge;
- .6 concurred with the group's views that regulations other than those referred to in the terms of reference should be reviewed for inclusion of various functions within the safety centre either as a requirement or as a recommended practice, and agreed to consider this matter at FP 54;
- .7 noted the discussion regarding the use of Information Technology Systems (computers) in providing the required system functionality in the safety centre and in other locations and concurred that such systems would be useful; and
- .8 noted that the correspondence group had considered that the work on this item was not complete and that the annexes to the report of the group were in draft form only.

12.6 The Sub-Committee further noted that FP 53, had established the Drafting Group on Clarification of SOLAS chapter II-2 regarding the Interrelation between Central Control Station and Safety Centre and on receiving its report (FP 53/WP.7), had:

- .1 noted that the group, on the basis of document FP 53/8, had made further progress on the preparation of draft clarifications of SOLAS chapter II-2 requirements regarding interrelation between central control stations and safety centres, which are set out in annex 1 to document FP 53/WP.7;
- .2 having noted the opinion of the group that the correspondence group to be established should be informed of the outcome of the work currently carried out by the NAV Sub-Committee under its work item on "Development of guidelines for IBS, including performance systems for bridge alert management", agreed to request the Secretariat to keep the Sub-Committee informed accordingly;
- .3 having considered the above issues and recognizing the necessity to make progress on this item, instructed the correspondence group, to further consider annex 1 to document FP 53/WP.7, together with the comments contained in document FP 53/8, and prepare the final draft clarification for the consideration of FP 54.

12.7 The Sub-Committee considered document NAV 55/12 (CLIA) providing information regarding aspects related to the construction and layout of Safety Centres and making reference to MSC/Circ.982 on *Guidelines on Ergonomic Criteria for Bridge Equipment and Layout* and SN.1/Circ.265 on *Guidelines on the Application of SOLAS regulation V/15 to INS, IBS and Bridge Design*. CLIA was of the view that the concepts and guidance outlined in the aforementioned circulars provided excellent guidance, in general, and, in particular, as applied in the context of the Safety Centre, and might be applicable to its relevant equipment, function, layout and procedures.

12.8 The Sub-Committee agreed that since no other substantial documents had been submitted on this issue to this session and the input from the FP Sub-Committee would only be available after FP 54 (April 2010), the matter should be postponed for further consideration at NAV 56, inviting Members to submit suitable proposals.

12.9 Accordingly, the Committee was invited to extend the target completion date of this agenda item to 2010.

13 REVIEW OF VAGUE EXPRESSIONS IN SOLAS REGULATION V/22

13.1 The Sub-Committee recalled that MSC 82 had considered a proposal by Germany (MSC 82/21/11) to develop, in view of some cases of stowage of containers above the line of visibility, a clarification of SOLAS regulation V/22 (Navigation bridge visibility) or revision of the regulation, to ensure safe navigation and to avoid ship detentions, and agreed to include, in the Sub-Committee's work programme, a high-priority item on "Review of vague expressions in SOLAS regulation V/22", with two sessions needed to complete the item.

13.2 The Sub-Committee also recalled that, at its fifty-fourth session, it had considered the above document MSC 82/21/11 (Germany) together with document NAV 54/17 (Denmark and Singapore), proposing an amendment of SOLAS regulation V/22, which enabled ships to verify compliance with SOLAS V/22, when loading deck cargo. There was a brief general discussion on the issue. Delegations who spoke were, in general, supportive of the idea of an amendment to SOLAS regulation V/22. However, concerns were raised as to the scope of application to different types of ships, applicability to existing ships, the potential need for new equipment, and the need for flexibility in the application of the proposed draft amendment. The Sub-Committee agreed that it was premature to take any decision at that time and that more detailed consideration was necessary prior to finalization. Member Governments were invited to submit suitable

proposals, taking into account the above concerns raised in Plenary, for further consideration at NAV 55.

13.3 The Sub-Committee further recalled that MSC 82 had noted a view that rather than developing amendments to the SOLAS Convention, guidance on the implementation of regulation V/22 might be prepared and agreed that it should be left to the Sub-Committee to decide on the course of action to be taken when addressing the issue.

13.4 The Sub-Committee considered document NAV 55/13 (China) proposing an amendment to paragraph 5.1.1.1.8 (view of the ship's side) of MSC/Circ.982 enabling ships to verify compliance with SOLAS regulation V/22.1.6. As it was not reasonable or practical to require ships like OSVs, salvage vessels and tugs to extend their bridge wings to the same breadth of the maximum beam of the ships, China proposed to revise that paragraph to make it clear that the bridge wings of these ships do not need to be provided out to the maximum beam of the ship.

13.5 The Sub-Committee was of the view that there was no need to revise MSC/Circ.982, since the proposed IACS Unified Interpretation to clarify the requirements relating to navigation bridge visibility of ship's side, as prescribed in SOLAS regulation V/22.1.6, submitted to the present session (NAV 55/17), was more appropriate.

13.6 The delegation of China acknowledged that it had taken note of the IACS proposal, as outlined in document NAV 55/17.

13.7 The Sub-Committee considered document NAV 55/13/1 (Norway) proposing a series of amendments to SOLAS regulation V/22, namely subparagraphs 22.1.2, 22.1.7, 22.1.8 and 22.1.9.4 in order to clarify the intent of the regulation and ensure uniform understanding of the requirements.

13.8 Several delegations spoke on the issue to voice concerns with respect to the proposed amendments. These concerns related to SOLAS regulation V/22.1.2 – Blind Sectors with respect to the “designated” conning position; SOLAS regulation V/22.1.7 – Height of lower edge of bridge front windows with respect to minimum lower height; meaning of the term “clear view”; conflicts with the calculation of angles of visibility under the dynamic conditions of pitch and roll, and applicability to existing ships.

13.9 The IACS observer was of the opinion that the proposed SOLAS regulations V/22.1.2 extended the blind sector, whilst SOLAS regulation V/22.1.8 contradicted the provisions of SOLAS regulation V/22.1.1.

13.10 The Sub-Committee noted the concerns raised with respect to this issue and noted the difficulty in reconciling these issues.

13.11 The Sub-Committee also considered document NAV 55/13/2 (Denmark) proposing an amendment to SOLAS regulation V/22.5 enabling ships to verify compliance with SOLAS regulation V/22 when loading deck cargo.

13.12 The Sub-Committee was of the view that the Danish proposal would apply more to container ship visibility.

13.13 Some delegations were of the opinion that the Norwegian and Danish proposals could be merged as one consolidated proposal. Other delegations, including industry observers, were of the view that the Danish proposal could be used as the basic text to develop a consolidated text for consideration at the next session.

13.14 Accordingly, the Sub-Committee was of the view that it was premature to take any decision at present and agreed to invite the Committee to extend the target completion date of this agenda item to 2010, since more time was needed to take a technically sound decision on the matter.

13.15 Members were invited to submit consolidated proposals for consideration at NAV 56.

14 REVISION OF THE GUIDANCE ON THE APPLICATION OF AIS BINARY MESSAGES

14.1 The Sub-Committee recalled that MSC 82, following consideration of document MSC 82/21/13 (Sweden) proposing to review the Guidance on the application of AIS binary messages (SN/Circ.236) on the basis of operational needs and experience gained and taking into account existing technical limitations, to facilitate an effective and appropriate use of AIS binary messages and protect the main function of AIS, had agreed to include, in the Sub-Committee's work programme, a high-priority item on "Revision of the Guidance on the application of AIS binary messages", with two sessions needed to complete the item.

14.2 The Sub-Committee also recalled that NAV 53 had noted 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.

14.3 The Sub-Committee further recalled that NAV 54 had considered documents NAV 54/18 (Japan) proposing the modification of a Trial set of binary messages, adopted at NAV 49 and the addition of new binary messages and NAV 54/18/2 (Japan) proposing the inclusion of new messages for Collision Avoidance. NAV 54 had also considered document NAV 54/18/1 (Sweden) providing reasoning for a revision of SN/Circ.236 and the setting up of a Correspondence Group for that purpose. Sweden was of the view that the new document should include an updated list of recommended AIS binary messages and guidance for their application as well as guidance for the application of regionally/nationally developed AIS binary messages.

14.4 The Sub-Committee noted that there was unanimous support for the proposals of Sweden and Japan. The delegation of Germany, supported by others, was of the view that the revision should include the graphical presentation of AIS binary messages on a reliable basis. Consequently, NAV 54 had agreed to establish an intersessional Correspondence Group under the coordination of Sweden to make progress on the issue and report to NAV 55.

14.5 The Sub-Committee considered document NAV 55/14 (Sweden) summarizing the work and recommendations of the Correspondence Group regarding the development of a new SN Circular on “Guidance on the Use of AIS Application Specific Messages” revoking existing SN/Circ.236 at a future date.

14.6 The Sub-Committee, with respect to, paragraphs 17.1 to 17.5 of document NAV 55/14, took action as follows:

- .1 agreed to develop a new SN circular on “Guidance on the Use of AIS Application Specific Messages” and recommended that SN/Circ.236 be revoked at some future date;
- .2 agreed to develop and maintain an AIS binary International Application (IA) Catalogue to allow future amendments and introduction of new messages on a regular basis;

- .3 agreed to include in the IA Catalogue, examples of how AIS binary message information was being portrayed;
- .4 noted the need for further discussions on the Navigational Intention Exchange Support System (NIESS) concept as proposed by Japan; and
- .5 noted the need for continuing work on the development of international binary message applications.

14.7 The Sub-Committee noted the views of the Correspondence Group (NAV 55/14, paragraph 7) that the use of AIS application specific messages (transferred as binary messages) was still an area under development and that many participants in the Correspondence Group had expressed an interest in keeping the issue of the application of AIS binary messages as an open work item for the NAV Sub-Committee so as to facilitate continued development. It was envisaged that additional or amended AIS application specific messages, using the binary message functionality of AIS, would be an important part of the development of services related to the e-navigation concept.

14.8 The Sub-Committee was of the opinion that with respect to the views of the Correspondence Group to keep this agenda item as a continuous item on the Sub-Committee's work programme, as per section 2.19.3 of the Committee's Guidelines on the organization and method of work (MSC-MEPC.1/Circ.2), an appropriate justification had to be provided for consideration by the Committee.

14.9 The Sub-Committee noted that the Guidelines discouraged subsidiary bodies from proposing continuous and umbrella items for inclusion in their work programmes and agendas; where this was not possible, the subsidiary body concerned should provide an appropriate justification for the Committee's consideration.

14.10 The Sub-Committee considered document NAV 55/14/1 (United States) summarizing activities related to the evaluation of AIS trial messages and also suggested additional areas, which it would like to see further developed, especially in the context of the e-navigation strategy and concept of operations.

14.11 The delegation of the United States stated that development and use of AIS binary messages would contribute much to e-navigation and was therefore in favour of extension of the target completion date of this agenda item.

14.12 The Sub-Committee considered document NAV 55/14/2 (Denmark, Estonia, Finland, Latvia, Lithuania, Poland and Sweden) proposing the inclusion of five AIS binary messages developed as a common effort of the Baltic countries as described in detail in the Correspondence Group report. The proposed messages were intended to replace the present Fairway closed, Dangerous cargo indication and Extended ship static and voyage-related data AIS binary messages described in SN/Circ.236. The proposed amendments would improve the preparedness of the authorities in case of an accident and result in reduced workload on ship bridges by minimizing the need for VHF communication including improvement in maritime safety and protection of the marine environment.

14.13 The delegation of the Russian Federation expressed its appreciation for the work carried out by the correspondence group and supported the proposals outlined in document NAV 55/14 including the work carried out by Denmark, Estonia, Finland, Latvia, Lithuania, Poland and Sweden (NAV 55/14/2). The Russian Federation also informed the Sub-Committee about their experience in the use of AIS base stations for transmitting Differential GNSS corrections for both GLONASS and GPS satellite navigation systems.

14.14 The Sub-Committee was evenly divided on the issue of extending the target completion date of this agenda item. However, the Sub-Committee agreed not to pursue the option of seeking an extension, recognizing that if and when the topic would need to be developed further, members could always propose a new item thereon to the Committee for inclusion in the Sub-Committee's work programme.

The Baltic AIS trial (AISBALTIC) project

14.15 The Sub-Committee noted with interest the information provided by Finland (NAV 55/INF.11) on the current use of AIS and potential developments for the future based on experience gained from the Baltic AIS trial (AISBALTIC) project.

Establishing AIS Binary Messages Drafting Group

14.16 After preliminary discussion, as reported in paragraphs 14.1 to 14.14 above, the Sub-Committee established a Drafting Group on AIS binary messages and instructed it, taking into account any decisions of, and comments and proposals made in Plenary, to consider the relevant documents submitted under agenda item 14, namely, NAV 55/14, NAV 55/14/1 and NAV 55/14/2 and undertake the following tasks:

- .1 prepare a draft SN circular on Guidance on the use of AIS application specific messages;
- .2 prepare a draft SN circular on Guidance for the presentation and display of AIS binary messages information;
- .3 develop a draft format of an AIS binary International Application (IA) Catalogue to allow future amendments and introduction of new messages on a regular basis;
- .4 take into account the role of the human element guidance as updated at MSC 75 (MSC 75/24, paragraph 15.7) including the Human Element Analysing Process (HEAP) given in MSC/Circ.878-MEPC/Circ.346 in all aspects of the items considered; and
- .5 submit a report to Plenary on Thursday, 30 July 2009 for consideration at Plenary.

Report of the Drafting Group

[14.17 Having received and considered the Drafting Group's report (NAV 55/WP.6), the Sub-Committee (with reference to paragraphs 3 to 5 and annexes 1, 2 and 3), took action as summarized hereunder.

Draft SN/Circular on Guidance on the use of AIS Application-Specific Messages

14.18 The Sub-Committee recommended the following Application-Specific Messages for international use:

- .1 Meteorological and hydrographic data;
- .2 Dangerous Cargo Indication;
- .3 Tidal window;

- .4 Extended Ship Static and Voyage Related Data;
- .5 Number of persons on board;
- .6 VTS-generated/Synthetic Targets;
- .7 Clearance time to enter port;
- .8 Marine traffic signal;
- .9 Berthing data;
- .10 Weather report from ship;
- .11 Area Notice;
- .12 Environmental;
- .13 Route information;
- .14 Text description; and
- .15 System-related Messages (described in annex 5 to Recommendation ITU-R M.1371-3):
 - .1 Interrogation for a specific IFM (FI = 2);
 - .2 Capability interrogation (FI = 3);
 - .3 Capability reply (FI = 4); and
 - .4 Application acknowledgement (FI = 5).

14.19 The Sub-Committee noted that the Drafting Group had reviewed the data format of each application-specific message and introduced some corrections and additional editorial clarifications. However, due to time constraints, some improvements were not completely considered.

14.20 The Sub-Committee noted that additional clarifications, improvements and editorial changes were required for the proper finalization of the draft SN/Circular on Guidance on the use of AIS Application-Specific Messages. These improvements and clarifications included:

- .1 harmonization of Weather Reports parameters with WMO Data fields;
- .2 inclusion of additional descriptors in table 11.10 (Notice Description);
- .3 development of tables defining ship deficiencies and additional characteristics;
and
- .4 information on invalid and default values.

14.21 The Sub-Committee instructed the Secretariat to consolidate further clarifications to be submitted by interested delegations after the current session and to finalize the revised draft

SN/Circular on Guidance on the use of AIS Application-Specific Messages for the consideration and approval of the Maritime Safety Committee, at its eighty-seventh session.

14.22 The Sub-Committee noted that the new SN/Circular on Guidance on the use of AIS application-specific messages would revoke SN/Circ.236 as from [1 January 2013].

Draft SN/Circular on Guidance for the presentation and display of AIS Application-Specific Messages information

14.23 The Sub-Committee endorsed the draft SN/Circular on Guidance for the presentation and display of AIS Application-Specific Messages information, as set out in annex ..., for approval by the Committee.

Draft format of an AIS International Application (IA) Catalogue

14.24 The Sub-Committee considered the recommended procedure and the draft submission form for the AIS International Application (IA) Catalogue, as set out in annex ..., agreed that the draft submission form could form the basis for an AIS International Application (IA) Catalogue and invited the Committee to endorse it.

14.25 The Committee was invited to consequently delete the item “Revision of the guidance on the application of AIS Binary Messages”, from the Sub-Committee’s work programme, as the work on this item had been completed.]

15 IMPROVED SAFETY OF PILOT TRANSFER ARRANGEMENTS

15.1 The Sub-Committee recalled that MSC 82 had considered document MSC 82/21/17 in which Brazil, the United States and IMPA, being concerned over continued pilots’ loss of life or serious injury suffered by pilots in the course of transferring to ships, proposed that amendments to SOLAS regulation V/23 and resolution A.889(21) on Pilot transfer arrangements should be developed to improve the safety of pilot transfer operation using ladders and agreed to include, in the work programmes of the NAV and DE Sub-Committees, a high-priority item on “Improved safety of pilot transfer arrangements”, with two sessions needed to complete the item and assigned the Sub-Committee as a coordinator.

15.2 The Sub-Committee also recalled that NAV 54 had considered the above document and agreed to the establishment of a Correspondence Group under the coordination of the United

States to develop draft texts and a final report for consideration and review by the NAV 55 as well as a comprehensive interim report to DE 52 to progress the matter.

15.3 The Sub-Committee noted that DE 52 had considered the interim report of the Correspondence Group (DE 52/20/1) and provided comments with regard to the proposed amendments to SOLAS regulation V/23 and the proposed amendments to resolution A.889(21). DE 52 had also agreed to forward the comments to the NAV Correspondence Group, for consideration and to NAV 55 for action, as appropriate.

15.4 The Sub-Committee also noted that MSC 86, when discussing the draft Guidelines for construction, installation, maintenance and inspection/survey of accommodation ladders and gangways, had noted concerns expressed by the IACS observer and agreed to delete the second sentence of paragraph 3.3 of the Guidelines; and that NAV 55 should consider paragraph 3.1 of the Guidelines in the context of its work on pilot transfer arrangements. Subsequently, MSC 86 approved MSC.1/Circ.1331 on the above Guidelines.

15.5 The Sub-Committee considered document NAV 55/15 (United States), report of the Correspondence Group on the outcome of the intersessional discussions on the issue, which included the comments and recommendations of DE 52.

15.6 There was general support for the report of the Correspondence Group. The delegation of the Bahamas voiced concern regarding the load testing requirement for pilot ladders as outlined in paragraph 2.3 of annex 1 of document NAV 55/14, relating to amendments to SOLAS regulation V/23. The delegation of Finland was of the opinion that mechanical hoists were necessary, bearing in mind relevant ice-breaker operations.

15.7 The Sub-Committee also considered document NAV 55/15/1 (Dominica) introduced by the observer from IMPA supporting the recommendations of the Correspondence Group, in particular, the proposed draft amendments to SOLAS regulation V/23 and resolution A.889(21).

15.8 The Sub-Committee, in order to improve the suitability and readiness of pilot ladders, agreed to invite the Committee to:

- .1 recommend that each Administration review all pilot ladder designs they had approved and determine whether they were meeting the requirements of SOLAS chapter V;

- .2 request IMPA to provide detailed information to the DE and NAV Sub-Committees relative to specific ladders their members were asked to “climb” that were not up to the SOLAS standard. IMPA should be encouraged to ask their member organizations to provide the above information to port State control officials in the ports where they provide pilotage services;
- .3 request shipowner organizations (IMO NGOs) to encourage their members to review the pilot ladders on their ships with a view to determining if they were meeting the requirements of SOLAS chapter V; and
- .4 instruct the FSI Sub-Committee to take appropriate action in encouraging port State control organizations to formally include pilot ladders as part of the safety equipment that their port State control officers would be examining in the course of a port State inspection.

15.9 The Sub-Committee further considered document NAV 55/15/2 (Panama) proposing modifications to the text of the report (NAV 55/15, annexes 1 and 2) of the Correspondence Group in relation to existing requirements of the Panama Canal regarding Pilot Transfer Arrangements.

15.10 The delegations of Norway and Nigeria voiced their concern regarding the maximum angle of slope for the sloping ladder when used in conjunction with the pilot ladder in vessels with large draft ranges, which could result in an angle of slope as low as 25°.

15.11 The delegation of Panama informed the Sub-Committee that the issue had been discussed and resolved in consultation with the Chairman of the Correspondence Group.

15.12 The INTERTANKO observer referred to the issue raised by IACS at MSC 86 with respect to paragraph 3.1 (location) of MSC.1/Circ.1331 on Guidelines for construction, installation, maintenance and inspection/survey of means of embarkation and disembarkation. INTERTANKO was of the view that this was in conflict with paragraph 3.3.1.2 of the proposed draft text of regulation V/23. Accordingly, INTERTANKO requested the Sub-Committee to instruct the Drafting Group to also consider this issue and suggest suitable text for review by the Sub-Committee. There was general support for the suggestion by INTERTANKO.

Establishing the Drafting Group

15.13 After preliminary discussion, as reported in paragraphs 15.1 to 15.12 above, the Sub-Committee established a Drafting Group on Pilot transfer arrangements 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 undertake the following tasks:

- .1 consider all documents submitted under agenda item 15 (NAV 55/15, NAV 55/15/1 and NAV 55/15/2) on improved safety of pilot transfer arrangements including paragraph 3.1 of MSC.1/Circ.1331 and using the annexes to document NAV 55/15 as the basic document, finalize draft texts of the proposed amendments to SOLAS regulation V/23 and resolution A.889(21), as appropriate, and recommendations for consideration and approval by Plenary; and
- .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, 30 July 2009 for consideration at Plenary.

Report of the Drafting Group

[15.14 Having received and considered the Drafting Group's report (NAV 55/WP.7), the Sub-Committee (with reference to paragraphs 3.1 to 4.1 and annexes 1 and 2), took action as summarized hereunder.

REVIEW OF SOLAS REGULATION V/23 AND RESOLUTION A.889(21)

15.15 The Sub-Committee endorsed the draft revised text of the proposed amendments to SOLAS regulation V/23 relating to pilot transfer arrangements with a view to approval by MSC 87 and adoption by MSC 88, as set out in annex

15.16 The Sub-Committee endorsed the draft revised text of the proposed amendments to resolution A.889(21) relating to recommendation on pilot transfer arrangements with a view to approval by the Committee and submission to A 27 for adoption, as set out in annex

REVIEW OF MSC.1/CIRC.1331 – GUIDELINES FOR CONSTRUCTION, INSTALLATION, MAINTENANCE AND INSPECTION/SURVEY OF MEANS OF EMBARKATION AND DISEMBARKATION

15.17 Based on the intervention of INTERTANKO concerning means of embarkation and disembarkation, the Sub-Committee was of the view that consequential amendments to paragraph 3.1 of MSC.1/Circ.1331 on Guidelines for construction, installation, maintenance and inspection/survey of means of embarkation and disembarkation were necessary, and agreed to the following text:

“3.1 Location

Except when the accommodation ladder is used in conjunction with the pilot ladder to meet the requirements of regulation V/23.3.3.2, ~~As far as practicable~~, the means of embarkation and disembarkation should, as far as practicable, be sited clear of the working area and should not be placed where cargo or other suspended loads may pass overhead.”

15.18 The Sub-Committee endorsed the proposed amended text of paragraph 3.1 of MSC.1/Circ.1331 on Guidelines for construction, installation, maintenance and inspection/survey of means of embarkation and disembarkation, and forwarded it to the Committee for consideration and appropriate action.

15.19 The Committee was invited to consequently delete the item “improved safety of pilot transfer arrangements” from the Sub-Committee’s work programme, as the work on this item had been completed.]

16 CASUALTY ANALYSIS

16.1 The Sub-Committee recalled that MSC 78 had decided that the item on “Casualty analysis” should remain on the work programme of the sub-committees.

16.2 The Sub-Committee noted that, at this session, no documents had been submitted for consideration or referred to it by either the FSI Sub-Committee or any other technical body of the Organization for review, and consequently agreed to defer further consideration of the item to NAV 56.

17 CONSIDERATION OF IACS UNIFIED INTERPRETATIONS

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

17.2 The Sub-Committee recalled further that NAV 52 and 53 had considered proposals for IACS Unified Interpretations, which were subsequently approved as MSC.1/Circ.1224 on Unified interpretations of SOLAS chapter V and MSC.1/Circ.1260 on Unified Interpretations of COLREG by MSC 82 and MSC 84, respectively.

17.3 The Sub-Committee recalled also that IACS had intended to submit a document to NAV 54 but had missed the deadline. However, the IACS observer had informed the Sub-Committee that IACS would submit relevant IACS Unified Interpretation proposals to NAV 55.

Clarification for the application of SOLAS regulation V/22.1.6

17.4 The Sub-Committee considered document NAV 55/17 (IACS) on the issue of providing clarification on the meaning of the requirement “*The ship’s side shall be visible from the bridge wing*” contained in SOLAS regulation V/22.1.6, with a view to achieving a common understanding in the implementation of this regulation. The basic intention of SOLAS regulation V/22.1.6 was for a navigating officer to be able to see the ship’s side from the bridge wing so as to facilitate the ability of the ship to:

- .1 be safely manoeuvred alongside other ships/objects;
- .2 launch and recover lifeboats; and
- .3 safely receive pilot boarding, stores, and bunker, etc.

In this regard, MSC/Circ.982 recommended that bridge wings should be provided out to the maximum beam of the ship. However, particular types of ships, such as tug/tow boats, Offshore Supply Vessels (OSVs), rescue ships, workshops (e.g., floating crane vessels), etc., offered unique problems in complying with the stringent recommendation in MSC/Circ.982 because of their special functions and characteristics in operation which frequently required such ships to

manoeuvre close to other ships/objects. In such operations, if the bridge wings extended to the ship's maximum beam or even near to it, this would result, and had resulted, in collisions of the bridge wings with other ships/objects.

17.5 The Sub-Committee concurred with the view of IACS and, [having considered document NAV 55/WP...., annex,] agreed to the draft MSC circular on Unified Interpretations of SOLAS regulation V/22.1.6 relating to navigation bridge visibility, and set out in annex ..., for submission to MSC 87 for approval.

17.6 The Sub-Committee recalled further that NAV 50 had considered on a preliminary basis the proposal by IACS (MSC 78/22/1, annex 7) regarding the IACS unified interpretation SC 139 relating to bridge visibility and invited Members to submit comments and detailed proposals on the matter. NAV 51 noted that no document had been submitted by IACS, who advised that they would submit relevant UIs to NAV 52. IACS subsequently had submitted two documents to NAV 52, on different issues, however they did not re-submit SC 139 to either NAV 53 or NAV 54.

17.7 The IACS observer further informed the Sub-Committee that they would submit any further relevant IACS Unified Interpretation proposals, including SC 139, to NAV 56.

18 WORK PROGRAMME AND AGENDA FOR NAV 56

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

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

18.3 The Sub-Committee also noted that MSC 85 had agreed to include, in the Sub-Committee's work programme, a high-priority item on "Development of an e-navigation strategy implementation plan", with four sessions needed to complete the item.

18.4 The Sub-Committee further noted that MSC 86 had agreed to include, in the Sub-Committee's work programme high-priority items on:

- .1 "Review of the principles for establishing the safe manning levels of ships including mandatory requirements for determining safe manning", with a target completion date of 2010, in co-operation with the STW Sub-Committee as coordinator;
- .2 "Amendments to the 1966 LL Convention and the 1988 LL Protocol", with a target completion date of 2011, assigning the SLF Sub-Committee as coordinator, and instructed NAV 55 to include the item in the provisional agenda for NAV 56;
- .3 "New symbols for AIS aids to navigation", with a target completion date of 2013, and instructed NAV 55 to include the item in the provisional agenda for NAV 56; and
- .4 "Amendments to the World-wide radionavigation system", with a target completion date of 2011 and instructed NAV 55 to include the item in the provisional agenda for NAV 56.

18.5 Taking into account the progress made at the current session, the decisions of MSC 85 and MSC 86 and the provisions of the agenda management procedure, the Sub-Committee prepared a proposed revised work programme and a manageable provisional agenda for NAV 56 (NAV 55/WP.3), as amended, based on those approved by MSC 86 (NAV 55/2/2, annexes 2 and 3) 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 had been completed:
 - .1.1 item H.2 Development of Guidelines for IBS, including 2009 performance standards for bridge alert management
 - .1.2 item H.5 Code of conduct during demonstrations/ 2009 campaigns against ships on high seas

.1.3	item H.6	Measures to minimize incorrect data transmissions by AIS equipment	2009
.1.4	item H.8	Revision of the Guidance on the application of AIS binary messages	2009
.1.5	item H.9	Improved safety of pilot transfer arrangements	2009
.2	extend the target completion date of the following work programme items:		
.1.1	item H.1	ITU matters	2011
.1.2	item H.1.1	Radiocommunication ITU-R Study Group matters	2011
.1.3	item H.4	Guidelines on the layout and ergonomic design of safety centres on passenger ships	2010
.1.4	item H.7	Review of vague expressions in SOLAS regulation V/22	2010

Arrangements for the next session

18.6 The Sub-Committee anticipated that Working Groups on the following subjects might be established at NAV 56:

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

High-level Action Plan of the Organization: Status of planned outputs for the 2008-2009 Biennium and proposals for the High-level Action Plan of the Organization and priorities for the 2010-2011 Biennium

18.7 The Sub-Committee recalled that under agenda item 2 – Decisions of other IMO Bodies, the Secretariat had provided information on action the High-level action plan of the Organization.

18.8 The Sub-Committee also recalled that, in the context of the requests of the Assembly made in resolution A.989(25) on Strategic Plan for the Organization (for the six-year period 2008 to 2013) and resolution A.990(25) on High-level Action Plan of the Organization and

priorities for the 2008–2009 biennium, MSC 84 had instructed the Secretariat to submit the information concerning review of progress made in implementing the High-level Action Plan and priorities for the 2008–2009 biennium and prepare proposals for the High-level Action Plan for the 2010-2011 biennium, as may be updated following the outcome of MSC 86, for submission to C 102.

18.9 The Sub-Committee further recalled that MSC 86, having considered document MSC 86/23/5 (Secretariat) on the status of the Committees' outputs for the 2008-2009 biennium, in the context of the outputs listed in resolution A.990(25), and recommendations made by the Chairmen's meeting (MSC 86/WP.11), had endorsed the status of the MSC planned outputs for the current biennium, set out in document MSC 86/26, annex 26, which included updates by the Chairman and the Secretariat, as authorized by the Committee, taking into account the outcome of MSC 86, for submission to C 102.

18.10 The Sub-Committee noted that the Committee, having considered document MSC 86/23/16 (Secretariat), proposing modifications to the planned output of the Committees for the 2010-2011 biennium, which took into account the progress made by the sub-committees during the current biennium, and the recommendations made by the Chairmen's meeting (MSC 86/WP.11), endorsed the proposals for High-level Action Plan of the Organization and priorities for the 2010-2011 biennium, set out in document MSC 86/26, annex 27, which included updates by the Chairman and the Secretariat, as authorized by the Committee, taking into account the outcome of MSC 86, for submission to C 102, and requested the Secretariat to submit any changes to the annexed proposals emanating from NAV 55 and DSC 14 to CWGSP 9 or C/ES.25, as appropriate.

18.11 The Sub-Committee also noted the information on the status of planned outputs of the High-level Action Plan of the Organization and priorities for the 2008-2009 biennium and the 2010-2011 biennium relevant to the Sub-Committee, as set out in annexes 3 and 4 to document NAV 55/WP.3 and Corr.1 for submission to MSC 87 for consideration and action, as appropriate.

Date of the next session

18.12 The Sub-Committee noted also that the fifty-sixth session of the Sub-Committee had been tentatively scheduled to be held from [26 to 30 July] 2010 at IMO Headquarters.

19 ELECTION OF CHAIRMAN AND VICE-CHAIRMAN FOR 2010

19.1 In accordance with Rule 16 of the Rules of Procedure of the Maritime Safety Committee, the Sub-Committee unanimously re-elected Mr. J. M. Sollosi (United States) as the Chairman and Mr. Raja Datuk Malik (Malaysia) as the Vice-Chairman for 2010 respectively.

20 ANY OTHER BUSINESS

Codes, recommendations, guidelines of non-mandatory instruments

20.1 The Sub-Committee recalled that NAV 54 had:

- .1 considered document NAV 54/24 (Secretariat), containing at annex the list of codes, recommendations, guidelines and other non-mandatory instruments under the purview of the NAV Sub-Committee, which the Sub-Committee had been requested to review by MSC 83;
- .2 in view of the length of the list attached to document NAV 54/24, containing 169 non-mandatory instruments, agreed to approve the list attached to document NAV 54/24 as being the list of relevant documents;
- .3 agreed that there was not sufficient time to review carefully the complete list of non-mandatory instruments under the purview of the Sub-Committee during that session and that there was a need for experts to take a detailed look at these documents and to examine the need to revise or delete some of the documents; and
- .4 decided to establish a Correspondence Group to review the list intersessionally.

20.2 The Sub-Committee briefly considered document NAV 55/20 (United Kingdom), containing the recommendations and comments of the Correspondence Group with regard to the existing NAV related codes, recommendations and guidelines of non-mandatory instruments. The Sub-Committee decided to refer the document for detailed consideration by the Technical Working Group relating to performance standard issues and by the Ships' Routeing Working Group relating to operational issues.

Terms of reference for the Technical and Ships' Routeing Working Groups

20.3 The Sub-Committee instructed the Technical Working Group, taking into account decisions of, and comments and proposals made in Plenary to consider in detail Nos. 7, 9, 11, 12, 14, 17, 19, 21, 23, 24, 25, 31, 34, 37, 41, 44, 45, 48, 49, 52, 53, 67, 68, 69, 70, 82, 91, 94, 95, 98, 100, 111, 123, 124, 126, 127, 134, 135, 136, 138, 140, 144 and 162 of document NAV 55/20, and Nos. 13, 18, 22, 32, 92, 104, 110, 121, 122, 125, 130, 131, 132, 133, 145, 146, 147, 150 and 166 of document NAV 55/20, to the Ships' Routeing Working Group, and prepare comments and recommendations.

Report of the Technical and Ships' Routeing Working Groups

[20.4 In considering the relevant parts of the Technical and Ships' Routeing Working Groups report (NAV 55/WP.4, paragraph 8.1 and NAV 55/WP.2, paragraphs 9.2 and 9.3 and annex 12), the Sub-Committee took action as indicated in the ensuing paragraphs.

20.5 The Sub-Committee identified the following issues:

- .1 No.37 – resolution A.708(17) – Navigation bridge visibility and functions – it was noted that not all the issues contained in this resolution were transferred to SOLAS chapter V and that the resolution should therefore be retained;
- .2 No.68 – MSC.64(67), annex 1 – Recommendations on new and amended performance standards for integrated bridge systems (IBS) – it was noted that this recommendation would become obsolete after the adoption of the Guidelines for bridge equipment and systems, their arrangement and integration (paragraphs 3.2 to 3.4 and annex 1 refer);
- .3 No.91 – MSC/Circ.563 – Unification of ARPA symbols – it was noted that after the approval by MSC 85 last year, an Add.1 to SN/Circ.243 was issued;
- .4 No.111 – MSC/Circ.1061 – Guidance for the operational use of Integrated Bridge Systems (IBS) – it was noted that this circular was no longer under review and that the text 'Currently under review' could be deleted;
- .5 No.122 – SN/Circ.62 – Recommendations for the marking of offshore fixed structures – it was noted that the reference to the IALA document for the marking of offshore structures was IALA O-134;

.6 No.163 – A.706(17) – World-wide navigation warning service, as amended – it was noted that MSC/Circ.685, MSC/Circ.750 and MSC/Circ.957 were superseded by MSC.1/Circ.1288; and

.7 it was further noted that resolution A.705(17) on Recommendations on the promulgation of MSI was amended by MSC/Circ.1287.

20.6 The Sub-Committee instructed the Secretariat to take appropriate action with regard to the existing NAV-related codes, recommendations and guidelines of non-mandatory instruments.]

Revision of Ships Position Reporting Format

20.7 The Sub-Committee noted that at NAV 53, the delegation of Iran (Islamic Republic of) had raised a concern in respect of ships reporting position by VHF despite the availability of the same information through AIS in the Ships' Routeing Working Group which was supported by some delegations. However, some delegations at the same Working Group, supported the idea of position reporting by VHF despite the availability of the same and even more information through AIS, for the reason that it was the best way for the VTS operator to ensure actual presence of the OOW on the bridge and to prevent that the bridge was left unattended in a high risk area. NAV 53 had requested all Member Governments to consider and revise, as necessary, their mandatory ship reporting systems, so as to avoid duplication of information and reduce the items in the reporting format to those which were not available through AIS and other sources.

20.8 The Sub-Committee considered document NAV 55/20/1 (Islamic Republic of Iran) and was evenly divided on the issue. Recognizing that there was merit in the proposal with regard to reducing the voice reporting burden on watchkeepers including simplification of the reporting format, the Sub-Committee noted there was a need to seek a balance between voice and automated reporting.

20.9 Accordingly, the Sub-Committee decided to refer document NAV 55/20/1 to the Ships Routeing Working Group and instructed it, taking into account decisions of, and comments and proposals made in Plenary, to provide comments/recommendations.

Report of the Ships' Routeing Working Group

[20.10 In considering the relevant part of the Ships' Routeing Working Group's report (NAV 55/WP.2, paragraphs 9.4 to 9.12), the Sub-Committee took action as indicated in the ensuing paragraphs.

20.11 The Sub-Committee welcomed the effort made by the Islamic Republic of Iran to promote the use of AIS as a useful tool of providing information required by international reporting schemes. The Sub-Committee further acknowledged that double reporting should be avoided where possible and that correct AIS information help to reduce uncertainty and misinterpretation when conveying safety-relevant information in ship-to-shore communication.

20.12 However, the Sub-Committee agreed that the proposal from the Islamic Republic of Iran is ahead of its time and premature to be implemented at this stage as a number of erroneous AIS information were still transmitted by a considerable number of ships.

20.13 The Sub-Committee concluded that AIS data for the time being have a complementary character and useful to cross-check information provided by ships. Thus the Sub-Committee could not agree on the proposal at this session and considered that the revision of the ship's position reporting format and procedures may be possible after implementing the e-navigation strategy and its future applications.]

Operation of the Bridge Navigational Watch Alarm System

20.14 The Sub-Committee recalled that the Performance standards for Bridge Navigational Watch Alarm System (BNWAS) were adopted by MSC 75 and that MSC 86 had recently adopted carriage requirements for BNWAS, which shall enter into force on 1 January 2011.

20.15 The Sub-Committee briefly considered document NAV 55/20/2 (United Kingdom and Denmark) relating to the operation of the Bridge Navigational Watch Alarm System (BNWAS) including its reset function and was of the view that the proposal was viable.

20.16 The Sub-Committee decided to refer the document for detailed consideration by the Technical Working Group with respect to the reset function of the BNWAS.

Report of the Technical Working Group

[20.17 In considering the relevant part of the Technical Working Group's report (NAV 55/WP.4, paragraphs 8.2 and 8.3), the Sub-Committee took action as indicated in the ensuing paragraphs.

20.18 The Sub-Committee concurred with the view of Denmark and the United Kingdom that three methods for the reset function were described in the performance standards for BNWAS given in resolution MSC.128(75), as follows:

- .1 by a single operator action from a device forming an integral part of the BNWAS, for example a manually operated button or a touch screen; or
- .2 by external inputs from other equipment registering physical activity, for example sensors preferably detecting the presence and movements of a human body or floor pressure pads detecting movement of a human; or
- .3 by external inputs from other equipment registering mental alertness of the OOW, for example speech recognition sensors or changes in the operation of the manual controls of bridge equipment.

20.19 The Sub-Committee further noted that the performance standards for BNWAS define three operational modes:

- .1 Automatic (Automatically brought into operation whenever the ship's heading or track control system is activated and inhibited when this system is not activated);
- .2 Manual ON (In operation constantly); and
- .3 Manual OFF (Does not operate under any circumstances),

but SOLAS regulation V/19.2.2.3 required that the BNWAS was operational whenever the ship was underway at sea. The Automatic mode of the performance standard was therefore not usable on a ship compliant with the SOLAS Convention. It was considered that it would not be possible to change the performance standards before the date at which the carriage requirements comes into force (1 July 2011). In order to conform with the performance standards, therefore, equipment would include the Automatic mode, despite that this operational mode should not be used on ships which are subject to the SOLAS Convention.

20.20 Member Governments were invited to note this information.]

Review of SOLAS regulation V/19.2.2.2 relating to the carriage of a daylight signalling lamp

20.21 The Sub-Committee noted that STW 40 had approved the report of the *ad hoc* intersessional meeting of the STW Working Group on the comprehensive review of the STCW Convention and Code (STW 40/7/3) in general and, in particular, invited the Committee to instruct NAV 55 to review SOLAS regulation V/19.2.2.2 relating to the carriage of a daylight signalling lamp and provide its advice to STW 41. MSC 86 had instructed NAV 55 accordingly.

20.22 The Sub-Committee also noted that SOLAS regulation V/19.2.2.2 relating to the carriage of a daylight signalling lamp, as drafted read as follows:

“2.2 All ships of 150 gross tonnage and upwards and passenger ships irrespective of size shall, in addition to the requirements of paragraph 2.1, be fitted with:

- .2 a daylight signalling lamp, or other means, to communicate by light during day and night using an energy source of electrical power not solely dependent upon the ship's power supply.”

20.23 The Sub-Committee was of the view that SOLAS regulation V/19.2.2.2 should be retained without change and consequently the current training requirements in the STCW Convention and Code. The Secretariat was instructed to convey the outcome to STW 41.

Review of Annex IV of COLREGs and appendix 1 of the International Code of Signals prescribing the distress signal SOS to be sent by a signalling lamp

20.24 The Sub-Committee noted that STW 40 had approved the report of the *ad hoc* intersessional meeting of the STW Working Group on the comprehensive review of the STCW Convention and Code (STW 40/7/3) in general and, in particular, invited the Committee to instruct NAV 55 to review annex IV of COLREGs and appendix 1 of the International Code of Signals prescribing the distress signal SOS to be sent by a signalling lamp with a view to deleting the training requirements relating to visual signalling by Morse Code in the STCW Convention and provide its advice to STW 41. MSC 86 had instructed NAV 55 accordingly.

20.25 The Sub-Committee also noted that Annex IV of COLREGs, was also reproduced as Appendix 1 of the International Code of Signals relates to Distress signals, which used or exhibited together or separately, indicate distress and need of assistance.

20.26 The Sub-Committee further noted that amendments to Annex IV of the COLREGs were adopted by A 25 by resolution A.1004(25) and these would enter into force on 1 December 2009. Secondly, there was still a requirement in Annex IV of COLREGs relating to Distress signals that one of the signals consists of the group ...---... (SOS) in the Morse Code by any signalling method. Hence, it would be necessary to maintain the training requirements relating to visual signalling by Morse Code.

20.27 The Sub-Committee was of the view that it was important that mariners acquired and retained a working knowledge in recognition of Morse Code characters including single-letter signals of the International Code of Signals; however, proficiency in the transmission/reception of Morse Code needed not to be demonstrated. The Secretariat was instructed to convey this outcome to STW 41.

Review on a preliminary basis of draft revised Assembly resolution on Principles of Safe Manning (resolution A.890(21))

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

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

20.29 The Sub-Committee, noting that MSC 86 had instructed it accordingly, also noted that this sub-item would be on the provisional agenda for NAV 56 and at this session it was the intention to review the preliminary draft revised Assembly resolution from the operational aspect in Plenary and subsequently in detail at NAV 56 by a Drafting Group.

20.30 The Sub-Committee was of the opinion that the preliminary draft revised Assembly resolution on Principles of Safe Manning (resolution A.890(21), as amended), appeared to be

well drafted. However, with respect to the Appendix and Annex 5, the Sub-Committee agreed to the following amendments:

- .1 “APPENDIX Issued under the provisions of regulation V/14(b).2”.
- .2 “Annex 5 section 1.2 Submission needs to take into account the requirements of Annexes 2 and 3 in the context of the management of the safety, security and protection of the marine environment functions of a ship”.
- .3 “Annex 5 section 2.2 Having evaluated and approved the proposal the Administration should issue a safe manning document including special requirements and conditions [supported by a minimum safe manning assessment]”.

20.31 The Secretariat was instructed to convey this outcome to the STW Sub-Committee and also to include this work programme item in the provisional agenda for NAV 56.

Review of SOLAS regulation V/19 relating to display of radar shadow sectors on the bridge

20.32 The Sub-Committee recalled that DE 52 had noted document DE 52/20/8 (France), concerning discrepancies in the provisions of the Survey guidelines under the harmonized system of survey and certification, 2007 and SOLAS chapter V concerning the display of radar shadow sectors on the bridge. Noting that the issue concerned a navigational matter and as such did not fall under its remit, DE 52 had referred the document to the NAV Sub-Committee for consideration.

20.33 The Sub-Committee considered document DE 52/20/8 (France). France was of the view that resolution A.997(25) required an Administration to confirm that radar shadow sectors are displayed in the bridge. A.997(25) supported this requirement by a reference to SOLAS regulation V/19. SOLAS regulation V/19 contained no provision relating to radar shadow sectors. France’s intention was to make these two texts consistent.

20.34 The Sub-Committee noted that in resolution A.997(25), reference to a table of residual deviations for the magnetic compass and a diagram of the radar installation’s shadow sectors was given in the following places:

- .1 Guidelines for surveys for the Cargo Ship Safety Equipment Certificate (Initial surveys)

Section 1.1.5.8

- .2 Guidelines for surveys for the Cargo Ship Safety Equipment Certificate (Annual surveys)

Section 1.2.1.25

- .3 Guidelines for surveys for the Passenger Ship Certificate (Initial surveys)

Section 5.1.3.10

- .4 Guidelines for surveys for the Passenger Ship Certificate (Renewal surveys)

Section 5.2.1.29

20.35 The Sub-Committee also noted that it was normal practice for all Administrations to issue Guidance notes meant primarily for the guidance of surveyors inspecting navigational equipment installations required to be carried under SOLAS regulation V/19. These notes also indicated to owners, masters and crews, shipbuilders and installation companies the requirements which certain vessels should meet in order to comply with the “Regulations”.

20.36 The Sub-Committee further noted that all ships were required to carry a table of residual deviations for the magnetic compass and a diagram of the radar installation’s shadow sectors. SOLAS regulation V/19, as presently drafted, contained no provision relating to displaying on the bridge a table of residual deviations for the magnetic compass or a diagram of radar shadow sectors. It was common good seamanship that this was being done on all ships and hence there was no specific need for an amendment to SOLAS regulation V/19 or if it was indeed deemed to be necessary then there would also be a need to ensure that there was a corresponding provision in SOLAS regulation V/19 for displaying a table of residual deviations for the magnetic compass.

20.37 The Sub-Committee was of the view that there was no need to amend SOLAS regulation V/19 for displaying radar shadow sectors.

World-Wide Radionavigation System

20.38 The Sub-Committee noted with interest the information provided by the Secretariat (NAV 55/INF.2) concerning the world-wide radionavigation system. In July 2008, there had been an exchange of communications between the Commandant of the United States Coast Guard, Admiral Thad W. Allen and the Secretary-General, with regard to the Standard Positioning Service (SPS) of the Global Positioning System (GPS) of the World-Wide Radionavigation System. The United States Government planned to take all necessary measures for the foreseeable future to maintain the integrity, reliability and availability of the GPS SPS and expected to provide at least six years notice prior to any termination of GPS operations or elimination of the GPS SPS.

20.39 The ICS observer requested the United States delegation to clarify a recent report of the General Accountability Office (GAO) concerning the possibility for GPS outages in the near future.

20.40 The delegation of the United States stated that there had been a number of inaccurate press reports concerning the health of the GPS constellation after publication of a recent GAO report of 30 April 2009, which stated concerns regarding insufficient satellites in the pipeline to sustain the constellation. GPS remained a very solid programme with the largest number of healthy satellites and the best overall constellation performance ever seen. The United States continued to have extremely high confidence that the GPS constellation would remain healthy for the foreseeable future. The constellation was undergoing active modernization, and the United States planned to invest US\$6B in the GPS system over the next five years, including launching two new satellites within the next year to fortify the 30 currently operating and in orbit. In addition to those 30, there were another three residual satellites that could be reactivated in 10 days to two weeks. Only 21 operating satellites out of 24 orbiting spheres were needed to provide optimal positioning accuracy and met the performance standard advertised by the United States Government. So there were currently a considerable number of “on orbit spare” satellites. The next generation of satellites, GPS III, was currently in development and on schedule for a first launch in 2014. Although a few satellites were past their design lives, the United States Government had historically very successfully managed the GPS system by keeping older satellites usable well past (at more than twice) their design lives, and would continue to do so. The United States recognized that GPS was a ubiquitous global utility the entire world depended on more and more with each passing day. It was a precious global asset that would not be

allowed to fail, and in fact was not in any danger of failing whatsoever. The United States foresaw no loss of service in the future, near or far.

Precautions in the use of navigational charts in Greenland waters

20.41 The Sub-Committee noted with interest the information provided by Denmark (NAV 55/INF.6) regarding precautions in the use of navigational charts in Greenland waters in terms of inaccuracies in paper charts due to incorrect positioning of the coastline, geographical datum and hydrographic surveys. This included information regarding the use of electronic navigational charts (ENC) in Greenland's coastal waters.

AIS-based Aids to Navigation (AIS AtoN)

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

20.43 The delegations of Sweden and Australia including the observers from IALA and IHO complimented Denmark on the study undertaken with respect to AIS AtoN trials. The observer from IALA informed the Sub-Committee that IALA was organizing a workshop on the matter in January 2010 and its outcome would be reported to NAV 56.

Electronic Navigational Charts (ENCs) for the Cook Islands

20.44 The delegation of the Cook Islands informed the Sub-Committee that its Government had been advised that Electronic Navigational Charts (ENCs) for the south Pacific region were being prepared and would be available prior to the implementation of the mandatory carriage requirements for ECDIS. The Cook Islands wished to put on record their appreciation to IHO and the United Kingdom and the French Hydrographic Services.

Expressions of appreciation

[more to come]

21 ACTION REQUESTED OF THE COMMITTEE

[To be prepared by the Secretariat]
