



SUB-COMMITTEE ON SAFETY OF  
NAVIGATION  
51st session  
Agenda item 19

NAV 51/19  
4 July 2005  
Original: ENGLISH

## REPORT TO THE MARITIME SAFETY COMMITTEE

### Table of contents

Section	Page No.
1 INTRODUCTION – ADOPTION OF THE AGENDA	4
2 DECISIONS OF OTHER IMO BODIES	7
3 ROUTEING OF SHIPS, SHIP REPORTING AND RELATED MATTERS	8
4 REVISION OF THE PERFORMANCE STANDARDS FOR INS AND IBS	18
5 REVIEW OF THE 2000 HSC CODE AND AMENDMENTS TO THE DSC CODE AND 1994 HSC CODE	22
6 EVALUATION OF THE USE OF ECDIS AND ENC DEVELOPMENT	23
7 REVIEW OF THE OSV GUIDELINES	30
8 REVIEW OF THE SPS CODE	31
9 ITU MATTERS, INCLUDING RADIOCOMMUNICATION ITU-R STUDY GROUP 8 MATTERS	32
10 PASSENGER SHIP SAFETY: EFFECTIVE VOYAGE PLANNING FOR PASSENGER SHIPS	33
11 MEASURES TO ENHANCE MARITIME SECURITY	37
12 WORLD-WIDE RADIONAVIGATION SYSTEM (WWRNS)	38
13 CASUALTY ANALYSIS	39
14 CONSIDERATION OF IACS UNIFIED INTERPRETATION	40

For reasons of economy, this document is printed in a limited number. Delegates are kindly asked to bring their copies to meetings and not to request additional copies.
--

<b>Section</b>	<b>Page No.</b>
15 REVISION OF PERFORMANCE STANDARDS FOR VDRs AND S-VDRS	41
16 WORK PROGRAMME AND AGENDA FOR NAV 52	42
17 ELECTION OF CHAIRMAN AND VICE-CHAIRMAN FOR 2006	44
18 ANY OTHER BUSINESS	44
19 ACTION REQUESTED OF THE COMMITTEE	47

### LIST OF ANNEXES

ANNEX 1	NEW AND AMENDED TRAFFIC SEPARATION SCHEMES
ANNEX 2	ROUTEING MEASURES OTHER THAN TRAFFIC SEPARATION SCHEMES
ANNEX 3	DRAFT ASSEMBLY RESOLUTION A.....(24) – ADOPTION OF AMENDMENTS TO THE EXISTING MANDATORY SHIP REPORTING SYSTEM “IN THE GREAT BELT TRAFFIC AREA”
ANNEX 4	DRAFT RESOLUTION MSC.[...](81) MANDATORY SHIP REPORTING SYSTEM FOR THE CANARY ISLANDS
ANNEX 5	DRAFT ASSEMBLY RESOLUTION A....(24) – SHIPS’ ROUTEING – ESTABLISHMENT OF AN AREA TO BE AVOIDED IN THE GALAPAGOS ARCHIPELAGO
ANNEX 6	DRAFT ASSEMBLY RESOLUTION A.....(24) – SHIPS’ ROUTEING
ANNEX 7	TERMS OF REFERENCE FOR THE CORRESPONDENCE GROUP ON INS AND IBS AND DRAFT STRUCTURE OF PERFORMANCE STANDARDS FOR INS
ANNEX 8	DRAFT PROPOSED AMENDMENTS TO THE DSC CODE
ANNEX 9	DRAFT RESOLUTION MSC.[....](81) – ADOPTION OF AMENDMENTS TO THE INTERNATIONAL CODE OF SAFETY FOR HIGH-SPEED CRAFT, 2000 (2000 HSC CODE), AS AMENDED
ANNEX 10	DRAFT SPECIFICATION OF A WORLD-WIDE INTERNET BASED CHART CATALOGUE PROVIDED BY IHO ON BEHALF OF ITS MEMBER STATES
ANNEX 11	TERMS OF REFERENCE OF THE CORRESPONDENCE GROUP ON EVALUATION OF THE USE OF ECDIS AND ENC DEVELOPMENT

- ANNEX 12 DRAFT ASSEMBLY RESOLUTION A.....(25) – GUIDELINES ON VOYAGE PLANNING FOR PASSENGER SHIPS OPERATING IN REMOTE AREAS
- ANNEX13 DRAFT PERFORMANCE STANDARDS FOR ESSENTIAL SYSTEMS AND EQUIPMENT ON PASSENGER SHIPS FOR SAFE RETURN TO PORT AFTER A CASUALTY AND FOR THREE HOURS TIME TO REMAIN HABITABLE AFTER A CASUALTY
- ANNEX 14 DRAFT JUSTIFICATION FOR A PROPOSED NEW WORK PROGRAMME ITEM ON PERFORMANCE STANDARDS FOR SHIPBORNE GALILEO RECEIVER EQUIPMENT
- ANNEX 15 DRAFT RESOLUTION MSC.[...](81) – ADOPTION OF AMENDMENTS TO PERFORMANCE STANDARDS FOR SHIPBORNE VOYAGE DATA RECORDERS (VDRS) (RESOLUTION A.861(20)) AND SIMPLIFIED VOYAGE DATA RECORDERS (S-VDRS) (RESOLUTION MSC.163(78))
- ANNEX 16 REVISED WORK PROGRAMME OF THE SUB-COMMITTEE
- ANNEX 17 PROVISIONAL AGENDA FOR THE FIFTY-SECOND SESSION

## 1 INTRODUCTION – ADOPTION OF THE AGENDA

1.1 The Sub-Committee on Safety of Navigation held its fifty-first session from 6 to 10 June 2005 at the Headquarters of the Organization, under the chairmanship of Mr. K. Polderman (The Netherlands). The Vice-Chairman, Dr. V.I. Peresytkin (Russian Federation), was also present.

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

ALGERIA	LEBANON
ANGOLA	LIBERIA
ANTIGUA AND BARBUDA	LITHUANIA
ARGENTINA	MALAYSIA
AUSTRALIA	MARSHALL ISLANDS
BAHAMAS	MEXICO
BANGLADESH	MOROCCO
BELGIUM	NETHERLANDS
BRAZIL	NIGERIA
CANADA	NORWAY
CHILE	PANAMA
CHINA	PERU
COLOMBIA	PHILIPPINES
CUBA	POLAND
CYPRUS	PORTUGAL
DENMARK	REPUBLIC OF KOREA
ECUADOR	ROMANIA
EGYPT	RUSSIAN FEDERATION
ESTONIA	SAUDI ARABIA
FINLAND	SINGAPORE
FRANCE	SOUTH AFRICA
GERMANY	SPAIN
GREECE	SWEDEN
HONDURAS	TUNISIA
INDONESIA	TURKEY
IRAN (ISLAMIC REPUBLIC OF)	TUVALU
IRELAND	UKRAINE
ISRAEL	UNITED KINGDOM
ITALY	UNITED STATES
JAPAN	URUGUAY
LATVIA	VENEZUELA

and of the following Associate Member of IMO:

HONG KONG, CHINA

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

INTERNATIONAL HYDROGRAPHIC ORGANIZATION (IHO)  
 COMMISSION OF THE EUROPEAN COMMUNITIES (EC)  
 INTERNATIONAL FEDERATION OF SHIPMASTERS' ASSOCIATION (IFSMA)

INTERNATIONAL MOBILE SATELLITE ORGANIZATION (IMSO)  
INTERNATIONAL CHAMBER OF SHIPPING (ICS)  
INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO)  
INTERNATIONAL ELECTROTECHNICAL COMMISSION (IEC)  
INTERNATIONAL UNION OF MARINE INSURANCE (IUMI)  
INTERNATIONAL CONFEDERATION OF FREE TRADE UNIONS (ICFTU)  
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 ASSOCIATION OF INDEPENDENT TANKERS OWNERS  
(INTERTANKO)  
WORLD NUCLEAR TRANSPORT INSTITUTE (WNTI)  
INTERNATIONAL LIFEBOAT FEDERATION (ILF)  
INTERNATIONAL COUNCIL OF CRUISE LINES (ICCL)  
WORLD WIDE FUND FOR NATURE (WWF)  
INTERNATIONAL HARBOUR MASTERS' ASSOCIATION (IHMA)

1.4 In welcoming the participants on behalf of the Secretary-General, who was overseas on mission, Mr. K. Sekimizu, Director, Maritime Safety Division referred to the passing away, last May, of Captain Hein Mehrkens (Germany) President of IMPA, which had filled all with deep sorrow. The delegation of Germany was therefore, kindly requested to convey the Sub-Committee's and the Secretariat's condolences and sympathy to the family, friends and colleagues of Captain Mehrkens, who would be sadly missed.

Before addressing items on the Sub-Committee's agenda, Mr. Sekimizu referred to the decision of the Council, last November, that the theme for this year's World Maritime Day be "International Shipping – Carrier of World Trade", a theme which would give the opportunity to direct attention to the image of shipping as it was widely perceived nowadays. He shared the views expressed by the Secretary-General that the contribution shipping made to the global economy and the community as a whole, by providing the facilitation mechanism for more than 90 per cent of world trade, should be acknowledged and shipping should be presented to both the public and politicians as what it really was nowadays: largely safe, secure, efficient and environmentally friendly. The Secretary-General did not think it fair that the perception of shipping was of an uncaring and selfish industry paying scant concern about the environment and, therefore, had called on all who cared about shipping to work together to put this right, principally by adding their contribution to preventing accidents happening in the first place. For it was accidents, no matter how isolated in numbers and severity these days that tainted the image of shipping. He exhorted everyone to work harder than ever before to make ships safer and the environment cleaner and use every opportunity available to highlight the role of shipping and the progress it had made, and was constantly making, in terms of safety, security and protection of the environment.

With respect to the issue of passenger ship safety he highlighted the Sub-Committee's contribution concerning operational safety relating to effective voyage planning for passenger ships operating in remote areas and the development of supplementary guidelines on voyage planning for passenger ships operating in remote areas, as a standalone document based on resolution A.893(21) – Guidelines for voyage planning.

In relation to associated protective measures for particularly sensitive sea areas, Mr. Sekimizu mentioned proposals in respect of the waters off the Canary Islands, the Galapagos Archipelago and the Baltic Sea. He stated that the United Nations General Assembly, which, in its resolution on Oceans and the Law of the Sea adopted in December 2003, had noted with interest the ongoing discussions at IMO and that the Sub-Committee's outcome on the proposals for the Associated Protective Measures for the Galapagos Archipelago and Baltic Sea PSSAs would be forwarded directly to the twenty-fourth session of the Assembly for adoption.

As to proposals for ships' routing, ship reporting and other measures aimed at enhancing the safety of navigation in areas of identified navigational hazards and environmentally sensitive sea areas, he drew attention to the ones calling for the establishment of new traffic separation schemes "Along the coasts of Colombia" and areas to be avoided on the Caribbean coast of Colombia; as well as proposals for amendments to the existing traffic separation schemes "In the Strait of Juan de Fuca and its approaches", "Off Cabo de Gata", "In the Strait of Dover and Adjacent Waters", "Off Porkkala Lighthouse" including amendments to the existing mandatory ship reporting system "In the Great Belt Traffic Area".

Mr. Sekimizu stated that the importance of the human element in the safety of navigation could not be over emphasized and having recognized the significance of the man/machine interface in safe operations, the Sub-Committee was expected to undertake a preliminary review of the performance standards for an Integrated Navigation System (INS) and Integrated Bridge Systems (IBS), with a view to assisting ships' officers to become familiar with INS and IBS and competent in making full and effective use of such shipborne navigational equipment.

With respect to ECDIS issues, he recalled that almost nine years ago, the Committee had adopted performance standards for ECDIS. Under the revised SOLAS regulation V/19, which had entered into force on 1 July 2002, an Electronic Chart Display and Information System (ECDIS) might be now accepted as meeting the chart carriage requirements. At this session, the Sub-Committee was expected to progress work on the various issues concerning Evaluation of the use of ECDIS and ENC development. Progress on this particular issue must pave the way for further developing the whole concept of electronic navigation.

Mr. Sekimizu also provided an update on the IMO response to last year's tsunami tragedy in the Indian Ocean, which had been swift, decisive and comprehensive and had tackled the issues on two fronts: the humanitarian and the technical. He reported that at the UN Chief Executives Board last April, the Secretary-General had handed over to Secretary-General Annan a cheque for approximately £90,000, representing the balance of the Tsunami Maritime Relief Fund at that time. In his accompanying letter, the Secretary-General had requested that the IMO Fund money be used specifically for the restoration of the maritime infrastructure in the region affected and to support the reconstruction of the fishing industry.

On the technical front, IMO, IHO and IALA, at an Inter-Agency Meeting early in January, had established a joint action plan in response to the tragedy. IMO's attention was focused principally on ensuring the integrity of the region's maritime navigational infrastructure and hydrographic survey requirements to ensure the safe navigation of ships.

In concluding, Mr. Sekimizu conveyed the Secretary-General's growing concern over the apparently ever-increasing number and size of documents both submitted to and produced by Committees and Sub-Committees during sessions. These concerns were two-fold. Firstly, on the Secretariat's ability to manage this increase within its limited resources and still maintain the standards expected by the membership and, secondly, the effect that trying to manage the

increased workload, whilst also meeting the membership's expectations, was having on the well-being and health of the staff, as had particularly been the case in respect of the staff in the Translation Sections and also extended to staff in the Technical Divisions.

He referred to the trial system that had been put in place in an attempt to improve working and reporting practices so that the translation capacity did not adversely affect the output, particularly that emanating from working groups. The Committees had, however, decided not to adopt the trial system and the Secretariat had been advised to revert to the old one. Mr. Sekimizu stated that the Secretariat was examining the ceiling of pages that could reasonably be handled during a meeting taking into account the need to allocate some capacity for the translation of documents for other forthcoming meetings, which had to continue in order to meet the deadlines set for those meetings. For the time being, the delegations were requested to keep in mind the matters that had been raised and show the usual understanding and co-operation.

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

### **Adoption of the agenda**

1.6 The Sub-Committee adopted the agenda, as approved by MSC 80 (NAV 51/2/2, annex 2).

## **2 DECISIONS OF OTHER IMO BODIES**

2.1 The Sub-Committee noted, in general decisions and comments (NAV 51/2, NAV 51/2/1 and NAV 51/2/2), pertaining to its work made by MEPC 51, SLF 47, MEPC 52, MSC 79, STW 36, FP 49, COMSAR 8, DE 48, and MSC 80 and considered them under the relevant agenda items.

2.2 The Chairman informed the Sub-Committee of the following decisions of MSC 80 (MSC 80/24, paragraph 20.4) with respect to the application of the Committee's Guidelines:

- .1 with a view to improving the efficiency of meetings, the meeting of Chairmen reiterated its earlier recommendations to the effect that some flexibility should be introduced to allow working groups to start work on Monday mornings on standing issues. To that end, whenever possible, terms of reference of working groups could be agreed at the previous sessions of the parent Committee or Sub-Committee, as appropriate; and
- .2 MSC 80 agreed that working groups could start on Monday mornings on the basis of draft terms of reference presented by the Chairman of the Committee or Sub-Committee concerned, pending formal discussion of those terms of reference under the relevant agenda item. However, these measures should be decided by the Chairman of the Committee or Sub-Committee concerned, on a case-by-case basis (NAV 51/2/2, annex, paragraph 20.4).

2.3 In the light of the afore-mentioned decisions, the Chairman proposed that the Technical Working Group which might, as usual, have a heavy workload this week, could start work by provisionally addressing agenda items 9 and 15 of the Sub-Committee's provisional agenda pending introduction of the documents submitted in Plenary and comments and decisions of Plenary. The Sub-Committee concurred with the proposal, and also with the opinion of the

delegation of Panama that clear draft terms of reference were essential for such a course of action.

2.4 The Chairman of the Technical Working Group after finalizing the preliminary tasks confirmed the usefulness of this working arrangement.

### **3 ROUTEING OF SHIPS, SHIP REPORTING AND RELATED MATTERS**

#### **General**

3.1 The delegation of the Netherlands with reference to the ships' routeing proposals in general stated that the Sub-Committee needed to ensure that the requirements of the General Provisions on Ships' Routeing were fully met. Proposals which were not part of a PSSA designation needed a full justification. There was often no information on aids to navigation, traffic patterns, adequacy of hydrographic surveys and – most of all – the consideration of alternative routeing measures. As had been stated by the United States, at an earlier Sub-Committee meeting, particularly the use of the ultimate routeing measure, a mandatory Area to be Avoided, needed to be fully justified and only used as a last resort, when it had been proven that other routeing measures clearly would not have the desired effect.

3.2 The delegation of the United Kingdom stated that it had two general concerns on the proposals contained in a number of papers under agenda item 3. Firstly, a number of these proposals had been given preliminary consideration by the Maritime Safety Committee, and it had been agreed that these would be adopted by the Assembly and the MSC would not see these routeing measures again. It was the remit of MEPC to decide whether an area could be designated as a Particularly Sensitive Sea Area, and to generally consider whether particular routeing measures might assist in protecting the marine environment. However, the Sub-Committee was responsible for ensuring compliance with the General Provisions on Ships' Routeing and the Guidelines and Criteria for Ship Reporting Systems. Environmental protection was an important and principle justification, but key issues of safety of traffic flow and the potential for unnecessary constraints on shipping could not be over-ridden. The Working Group should therefore be allowed to carry out its assessment from the sole aspect of navigational safety and routeing on the basis of the General Provisions on Ships' Routeing, including authority to modify or even reject proposals that did not meet the criteria laid down. Secondly, there were significant weaknesses in the way a number of the proposals for new routeing measures had been presented in comparison with what was expected in MSC/Circ.1060 on Guidance on the Preparation of Proposals on Ships' Routeing Systems and Ship Reporting Systems, the General Provisions on Ships' Routeing and the Guidelines and Criteria for Ship Reporting Systems. This in turn would make it very difficult for the Working Group to assess these proposed routeing measures.

3.3 These general observations relating to the quality of ships' routeing proposals received extensive support in the Sub-Committee.

3.4 The Chairman, in summing up the extensive discussion on the quality of ships' routeing proposals, stressed the need to use a procedure similar to the one being presently used by the Committee for the assessment of proposals for new work programme items. He recommended that for future sessions of the Sub-Committee, a preliminary assessment of proposals would be made by himself 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 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. The Sub-Committee supported this proposed course of action.

### **New Traffic Separation Schemes (TSSs)**

#### **New Traffic Separation Schemes along the coasts of Colombia**

3.5 At the request of the Government of Colombia (NAV 51/3/9), the Sub-Committee discussed briefly a proposal for the establishment of new traffic separation schemes (TSSs) for eight Colombian ports, namely San Andres island, Puerto Bolívar, Santa Marta, Barranquilla, Cartagena, Turbo, Buenaventura including Bahía Malaga and Tumaco with a view to enhancing maritime and navigational safety and protection of the marine environment in areas of traffic convergence.

3.6 As to the proposal of Colombia (NAV 51/3/9), the delegation of Netherlands was confident that Colombia would be able to make any missing information available to the ships' routeing working group. However, if the working group did not have the full information available, as required in the GPSR, it should not hesitate to request Colombia to resubmit its proposal with the additional information to the next session of the Sub-Committee.

#### **Amendments to the existing Traffic Separation Schemes (TSSs)**

##### **Amendments to the existing Traffic Separation Schemes “In the Strait of Juan de Fuca and its approaches”**

3.7 At the request of the Governments of Canada and the United States (NAV 51/3/5), the Sub-Committee discussed briefly a proposal to amend the existing routeing system “In the Strait of Juan de Fuca and its Approaches” to address concerns relating to traffic congestion in the area of Swifsure Bank within the traffic separation scheme (TSS).

##### **Amendments to the existing Traffic Separation Scheme “Off Cabo de Gata”**

3.8 At the request of the Government of Spain (NAV 51/3/7), the Sub-Committee discussed briefly a proposal to amend the existing traffic separation scheme (TSS) “Off Cabo de Gata” to avoid a further increase in the number of fishing vessels using the area, and thus prevent intersection between ships using the TSS and fishing boats, which cut across the TSS when trawling the Cantos de Mónsul, Almería and Corea fishing grounds.

##### **Amendments to Existing Traffic Separation Scheme “Off Porkkala Lighthouse”**

3.9 At the request of the Governments of Estonia, Finland and the Russian Federation (NAV 51/3/11 and Corr.1 (English only)), the Sub-Committee discussed briefly a proposal to amend the existing traffic separation scheme (TSS) “Off Porkkala Lighthouse” to enhance maritime safety, safety of navigation and protection of the environment.

##### **Amendments to the existing Traffic Separation Scheme “In the Strait of Dover and Adjacent Waters”**

3.10 The delegation of the United Kingdom stated that document NAV 51/3/12 was prepared after a number of reports had been received by CHIRP – the Confidential Hazardous Incident Reporting Programme for Ships – that smaller vessels were using the deep-water route associated with the Dover Strait Traffic Separation Scheme and were hampering larger ships constrained by

their draught. The United Kingdom had been advised that France was also concerned about traffic in this area and was conducting research. The United Kingdom delegation therefore withdrew document NAV 51/3/12 pending the outcome of this research in anticipation of a more comprehensive proposal to be submitted jointly to NAV 52.

3.11 At the request of the Government of the United Kingdom (NAV 51/3/13), the Sub-Committee discussed briefly a proposal to amend the existing traffic separation scheme (TSS) "In the Strait of Dover and Adjacent Waters" as follows:

- .1 an amendment to the indicated traffic flow, replacing the current separation line close to the Southwest and Northeast of the F3 Station Buoy with a new Precautionary Area and new Recommended Direction of Traffic Flow in the vicinity of the F3 Station Buoy aimed at strengthening management of the flow of crossing traffic to ensure that northwest crossing traffic keeps to the north of the F3 Station Buoy and southeast crossing traffic keeps to the south; both leaving the F3 Station Buoy on the port side in accordance with convention and good practice, preventing instances of crossing vessels meeting head on.

### **Routeing measures other than Traffic Separation Schemes (TSSs)**

#### **Amendment to the existing Area to be Avoided: CS4 buoy, Dover Strait**

3.12 At the request of the Government of the United Kingdom (NAV 51/3/8), the Sub-Committee discussed briefly a proposal to relocate the associated Area to Be Avoided (ATBA) around the CS4 buoy. This had become necessary because the CS4 buoy had been moved 048° (150 metres) to a revised permanent assigned position in Latitude 51° 08'.668 N, Longitude 001° 34'.020 E. The associated ATBA therefore also needed to be relocated by the same bearing and distance so that it remained centred on the assigned position of the buoy station and could continue to provide the protection necessary.

#### **Establishment of new Areas to be Avoided in the Colombian part of the Caribbean Sea**

3.13 At the request of the Government of Colombia (NAV 51/3/10), the Sub-Committee discussed briefly a proposal for establishing new "ATBAs" with a view to enhancing maritime and navigational safety and protection of the marine environment, in areas where traffic converges. The "ATBAs" apply to the San Andrés and Providencia archipelago, the Rosario islands and Salmedina bank, and the Gulf of Morrosquillo that are protected by national environmental regulations.

3.14 The delegation of the United States stated that the proposal by Colombia for the establishment of areas to be avoided in the San Andrés and Providencia archipelago was in an area that was subject of a dispute and as per SOLAS regulation V/10.9, all adopted ships' routeing systems and actions taken to enforce compliance with these systems shall be consistent with international law, including the relevant provisions of the 1982 United Nations Convention on the Law of the Sea and as such there was no legal basis for approval of the proposed routeing measure.

3.15 The delegation of Colombia stated that Colombia had full sovereignty over the area in question.

## **Mandatory ship reporting systems**

### **Amendments to the existing mandatory ship reporting system “In the Great Belt Traffic Area”**

3.16 At the request of the Government of Denmark (NAV 51/3/3 and MSC 80/23/6), the Sub-Committee discussed briefly a proposal outlining amendments to the existing mandatory ship reporting system “In the Great Belt Traffic Area” for consideration and endorsement by the Sub-Committee and forwarding to the twenty-fourth session of the Assembly for adoption.

3.17 The Sub-Committee noted that MSC 80, in considering document MSC 80/23/6 (Denmark), had recalled that the existing mandatory ship reporting system “In the Great Belt Traffic Area” had been adopted in 1996. Denmark was seeking an amendment to the position of the reporting line, as this at present coincided with an area of potentially difficult navigation. The proposal had been submitted simultaneously to MSC 80 and NAV 51, so that, the Committee could authorize NAV 51 to consider the amendments to the existing mandatory ship reporting system “In the Great Belt Traffic Area” with a view to approval and direct submission to, and adoption by the twenty-fourth session of the Assembly. MSC 80 had agreed with the proposal and instructed NAV 51 accordingly.

#### **ASSOCIATED PROTECTIVE MEASURES FOR PSSAS**

### **Canary Islands PSSA - Associated Protective Measures: Establishment of new Traffic Separation Schemes; Areas to be Avoided; and a new mandatory Ship Reporting System**

3.18 The Sub-Committee recalled that MEPC 51 had received a request from Spain to designate as a PSSA, a sea area bounded by a polygonal line that surrounds the Canary Islands archipelago at a distance of 12 nautical miles and approved, in principle, the designation of the Canary Islands as a PSSA and noted that Spain would submit detailed proposals for the Associated Protective Measures (APMs) to NAV 51. NAV 51, should provide an appropriate recommendation to MEPC 53, when the final approval for the Canary Islands PSSA would be given.

3.19 At the request of the Government of Spain (NAV 51/3, NAV 51/3/1 and NAV 51/3/2), the Sub-Committee discussed briefly the following three APMs for protecting the island marine ecosystem of the Canary Islands PSSA:

- .1 the establishment of two new navigational routes for ships in transit through the PSSA, passing to the east and west of Gran Canaria island along courses equidistant from the coasts of that island and those of Fuerteventura and Tenerife respectively;
- .2 the establishment of new Areas to be Avoided, which are barred to shipping in transit through the PSSA and may be used only for small-scale inshore fishing and inter-island navigation, under certain conditions; and
- .3 the establishment of a new mandatory ship reporting system by vessels of 600 tons gross tonnage and upwards carrying heavy-grade oils, when entering and leaving the PSSA.

### **Galapagos Archipelago PSSA - Associated Protective Measure: Establishment of a new Area to be Avoided**

3.20 The Sub-Committee recalled that at MEPC 51, Ecuador had submitted an application to have the Galapagos Archipelago declared as a Particularly Sensitive Sea Area (MEPC 51/8/2), which was discussed and studied by the MEPC and the Informal Technical Group. MEPC 51 had approved, in principle, the designation of the Galapagos Archipelago as a PSSA, and noted that Ecuador would submit a detailed APM proposal to NAV 51, which should provide recommendations to MEPC 53.

3.21 At the request of the Government of Ecuador (NAV 51/3/4 and Corr.1 and MSC 80/23/7), the Sub-Committee discussed briefly a proposal to establish an “ATBA” outside and contiguous with the Galapagos Islands PSSA, for ships passing through it in transit. The “ATBA” was an APM intended to safeguard the island marine ecosystem of the PSSA and help in the vital task of preserving its unique ecosystem as a world natural heritage site.

3.22 The Sub-Committee noted that MSC 80 had also forwarded document MSC 80/23/7 (Ecuador) on the same issue for its consideration. At MSC 80, the delegation of the United States, while supporting, in principle, the proposal by Ecuador from the Committee's point of view, stated that they did not agree with the baselines used for the area and proposed that NAV 51 be instructed to consider each aspect of the proposed APM from the safety of navigation viewpoint and ensure that each measure was based on international law. In their view, MEPC 53 should be invited to review the aspects, which were not under the purview of the NAV Sub-Committee. The delegation of Panama, while wholly supportive of the Galapagos PSSA as a unique ecosystem, in referring to the second paragraph in the annex to document MSC 80/23/7, queried what was “large quantities of bunker fuel” as in subparagraph .1 and what “notification” would be required as in subparagraph .2. In their view, the proposed routing chart referred to in subparagraph .7 of the second paragraph should be referred to the Committee when produced in due course, for proper consideration. MSC 80 had agreed with the proposal of Ecuador and instructed NAV 51 accordingly, including taking into account the above views.

3.23 The delegation of the Netherlands supported by Australia, Germany, the Russian Federation, Singapore, the United Kingdom and the United States supported, in principle, all proposed APMs. However, as also had been stated by the United Kingdom in their earlier intervention, there was in their view a need for clarification on what the Sub-Committee was allowed and expected to do with regard to APM proposals. The Netherlands delegation stated that it was clearly the authority of MEPC to decide whether an area can be designated as a PSSA and to determine which Associated Protective Measures would best protect the environment in the area concerned. But after that the NAV Sub-Committee was ideally suited to determine which APM would best protect the safety of navigation as was required in paragraph 3.6 of the General Provisions on Ships' Routing (GPSR). The delegation of the Netherlands was of the view that proposals for APMs needed to be presented to the Sub-Committee with all elements that needed to be addressed for a proper assessment and review of the proposals and also that the Sub-Committee should have the mandate to modify or reject proposed APMs which did not fully meet the technical and operational criteria, even though MEPC had accepted them as part of designating a PSSA. In the view of the delegation of the Netherlands this clarification should be addressed within the present revision of resolution A.927(22).

**Baltic Sea Area PSSA - Associated Protective Measures: Establishment of new Traffic Separation Schemes; a Recommended deep-water route; mandatory Areas to be Avoided and amendments to existing Traffic Separation Schemes**

3.24 The Sub-Committee recalled that at MEPC 51, the Governments of Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland and Sweden had put forward a joint proposal to designate the Baltic Sea area, with the exception of Russian waters, as a particularly sensitive sea area (PSSA). MEPC 51 had agreed, in principle, to the designation of the Baltic Sea area with the exception of Russian waters (MEPC 51/22, paragraph 8.53) and noted that the countries concerned would submit detailed proposals for APMs to the Sub-Committee in 2005, which would provide recommendations to MEPC 53.

3.25 At the request of the Government of Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland and Sweden (NAV 51/3/6), the Sub-Committee discussed briefly a proposal outlining APMs, including, *inter alia*, the establishment of new Traffic Separation Schemes; a Recommended deep-water route, mandatory Areas to be Avoided and amendments to existing Traffic Separation Schemes.

3.26 The Sub-Committee also discussed briefly a proposal by WWF (NAV 51/3/14), supporting these measures and, in particular, supporting the proposed deep-water route and the two proposed mandatory ATBA. With respect to assisting the Sub-Committee's consideration of the mandatory Area to be Avoided proposals for Hoburgs Bank and Norra Midsjöbanken, WWF provided additional information on their ecological importance.

3.27 The Sub-Committee noted that, at MSC 80, the delegation of Sweden referred to the designation, in principle, by MEPC 51 of the Baltic Sea PSSA and indicated that the proposed APMs had been submitted directly to NAV 51 (NAV 51/3/6), but unfortunately without being submitted to the Committee. The Swedish delegation had requested that the Committee authorize NAV 51 to consider these; and to advise MEPC 53 accordingly for direct submission to the twenty-fourth session of the Assembly for adoption, in a manner consistent with the authorization on the proposal by Ecuador. The delegation of the Russian Federation stated that they were open to discussion of issues relating to APMs in the future, but that the Committee should have an opportunity to first consider them and that they were concerned at the apparent contravention of procedures in relation to this issue. As several delegations spoke in support of the oral intervention of the delegation of Sweden, MSC 80 instructed NAV 51 accordingly.

3.28 The delegation of the Russian Federation informed the Sub-Committee that it was actively involved in the development of these proposals for routeing systems and fully supported them. The Russian Federation was not in the list of co-sponsoring countries as they were not in favour of establishing large sea areas as PSSA. However, in their opinion, the APMs proposed were conventional routeing systems; similar systems already existed in the eastern part of the Baltic Sea; like these they would enhance maritime safety and protect the marine environment and should therefore be supported as such.

**Terms of Reference for the Ships' Routeing Working Group**

3.29 After a preliminary discussion, as reported in paragraphs 3.1 to 3.28 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):

- .1 to consider all documents submitted under item 3 regarding routing of ships and related matters and prepare routing and reporting measures, as appropriate and recommendations for consideration and approval by Plenary;
- .2 to consider the request of MEPC 51 including the documents submitted under item 3 regarding Associated Protective Measures (APMs) for the Canary Islands, the Galapagos Archipelago and the Baltic Sea Area PSSAs, namely (NAV 51/3, NAV 51/3/1, NAV 51/3/2, NAV 51/3/4 and Corr.1, MSC 80/23/7, NAV 51/3/6, NAV 51/3/14, NAV 51/INF.2 and NAV 51/INF.3) and advise the Sub-Committee on the outcome of an assessment of the operational aspects of the proposed Associated Protective Measures for the Canary Islands, the Galapagos Archipelago and the Baltic Sea Area PSSAs by focusing only on the technical and operational requirements;
- .3 to 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 and also the guidance given in MSC/Circ.1060 in all aspects of the items considered; and
- .4 to submit a report to Plenary on Thursday morning.

### **Report of the Ships' Routing Working Group**

3.30 Having received and considered the Working Group's report (NAV 51/WP.2), the Sub-Committee approved it in general and, in particular (with reference to paragraphs 3.1 to 9.5) took action as summarized hereunder.

### **New Traffic Separation Schemes (TSSs)**

#### **New Traffic Separation Schemes along the coast of Colombia**

3.31 The delegation of Colombia provided additional information related to traffic density, casualty information and co-operation between States. The Sub-Committee noted that the proposed TSS for the port of San Andrés Island was close to Nicaragua and as such Colombia should have consulted Nicaragua when submitting this proposal as it could affect the traffic to and from Nicaraguan ports. The Sub-Committee agreed that it would not be appropriate, at this stage, to consider the proposed TSS for the port of San Andrés without consultations with Nicaragua and considered the proposals for the other seven ports taking into account the additional information provided by Colombia.

3.32 The delegation of Colombia, while accepting the decision of the Sub-Committee not to consider the proposal relating to the TSS for the port of San Andrés, reserved its position and also informed the Sub-Committee that it would make a detailed submission to NAV 52.

3.33 The Sub-Committee approved to the proposed traffic separation schemes for seven Colombian ports with some corrections, namely, Puerto Bolivar, Santa Marta, Barranquilla, Cartagena, Turbo, Buenaventura including Bahia Malaga and Tumaco, as set out in annex 1, which the Committee is invited to adopt.

### **Amendment to the existing Traffic Separation Schemes (TSSs)**

#### **Amendments to the existing Traffic Separation Schemes “In the Strait of Juan de Fuca and its approaches”**

3.34 The Sub-Committee approved the proposed amendments to the existing traffic separation schemes “In the Strait of Juan de Fuca and its approaches” with some corrections to the description, as set out in annex 1, which the Committee is invited to adopt.

#### **Amendments to the existing Traffic Separation Scheme “Off Cabo de Gata”**

3.35 The Sub-Committee approved the proposed amendment to the existing traffic separation scheme “Off Cabo de Gata” with some corrections to the description, as set out in annex 1, which the Committee is invited to adopt.

#### **Amendments to the Existing Traffic Separation Scheme “Off Porkkala Lighthouse”**

3.36 The Sub-Committee approved the proposed amendments to the existing traffic separation scheme “Off Porkkala Lighthouse”, as set out in annex 1, which the Committee is invited to adopt.

#### **Amendments to Existing Traffic Separation Scheme “In the Strait of Dover and Adjacent Waters”**

3.37 The Sub-Committee approved the proposed amendments to the existing traffic separation scheme “In the Strait of Dover and Adjacent Waters” with some corrections to the description, as set out in annex 1, which the Committee is invited to adopt.

### **Routeing measures other than Traffic Separation Schemes (TSSs)**

#### **Amendment to the existing Area to be Avoided: CS4 Buoy, Dover Strait**

3.38 The Sub-Committee approved the proposed amendment to the existing Area to be Avoided around the CS4 Buoy in the Dover Strait with some corrections to the description, as set out in annex 2, which the Committee is invited to adopt.

#### **Establishment of new Areas to be Avoided in the Colombian part of the Caribbean Sea**

3.39 The delegation of Colombia provided additional information related to traffic density, and casualty information. The Sub-Committee noted that the proposed Area to be Avoided for the Archipelago San Andrés and Providencia was close to Nicaragua and as such Colombia should have consulted Nicaragua when submitting this proposal, as it may affect the traffic to and from Nicaraguan ports. The Sub-Committee agreed that it would not be appropriate, at this stage, to consider the proposed Area to be Avoided for archipelago of San Andreas and Providencia without consultations with Nicaragua and considered the proposals for the other two proposed Areas to be Avoided taking into account the additional information provided by Colombia.

3.40 The delegation of Colombia, while accepting the decision of the Sub-Committee not to consider the proposal relating to the Area to be Avoided for the Archipelago of San Andrés and Providencia, reserved its position and also informed the Sub-Committee that it would make a detailed submission to NAV 52.

3.41 The Sub-Committee approved the proposed two new Areas to be Avoided, the Rosario Islands and Salmedina Bank, and the Gulf of Morrosquillo with some corrections to the description, as set out in annex 2, which the Committee is invited to adopt.

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

3.42 The new TSSs and amendments to the existing TSSs and other routeing measures mentioned in above paragraphs (3.31 to 3.41) will be implemented at 0000 hours UTC 6 months after adoption by the Committee.

### **Mandatory ship reporting systems**

#### **Amendments to the existing mandatory ship reporting system “In the Great Belt Traffic Area”**

3.43 The Sub-Committee approved the proposed amendments to the existing mandatory ship reporting system with some corrections, as set out in annex 3, and instructed the Secretariat to forward it to the twenty-fourth session of the Assembly for adoption, as authorized by MSC 80. The proposed amended ship reporting system will enter into force after adoption by the Assembly at 0000 hours UTC on [1 July 2006].

### **Associated Protective Measures for PSSAs**

#### **Canary Islands PSSA: - Associated Protective Measures: Establishment of new Traffic Separation Schemes; Areas to be Avoided; and a new mandatory Ship Reporting System**

3.44 The Sub-Committee approved the proposed new traffic separation schemes for the Canary Islands with some corrections to the description, as set out in annex 1, which the Committee is invited to adopt.

3.45 The Sub-Committee approved the proposed new Areas to be Avoided by ships transiting the Canary Islands with some corrections to the description, as set out in annex 2, which the Committee is invited to adopt.

3.46 The Sub-Committee approved the proposed new mandatory ship reporting system for the Canary Islands with some corrections, as set out in annex 4, which the Committee is invited to adopt.

### **Implementation of Associated Protective Measures**

3.47 The Associated Protective Measures relating to the Canary Islands PSSA mentioned in paragraphs 3.44 to 3.46 will be implemented at 0000 hours UTC 6 months after adoption by the Committee.

#### **Galapagos Archipelago PSSA: - Associated Protective Measure: Establishment of a new Area to be Avoided**

3.48 The Sub-Committee approved the proposed new Area to be Avoided with some correction to the description, as set out in annex 5, and instructed the Secretariat to forward it to the twenty-fourth session of the Assembly for adoption, as authorized by MSC 80. The proposed

“Area to be Avoided” will enter into force at 0000 hours UTC, on [1 July 2006] after adoption by the Assembly.

3.49 The delegation of Ecuador informed the Sub-Committee that it would submit a proposal to NAV 52 for a mandatory ship reporting system for ships entering the Area to be Avoided in the Galapagos Archipelago.

**Baltic Sea Area PSSA: - Associated Protective Measures: Establishment of new Traffic Separation Schemes; a recommended Deep-Water Route; mandatory Areas to be Avoided and amendments to existing Traffic Separation Schemes**

3.50 The Sub-Committee noted that the proposal included the establishment of two new mandatory Areas to be Avoided and expressed the opinion that the proposal did not justify the establishment of mandatory areas, however it agreed that they could be established as two non-mandatory Areas to be Avoided. The delegation of Sweden stated that while they were not satisfied with this decision, they would accept it and make a more detailed submission to NAV 52.

3.51 The Sub-Committee approved the proposed new Traffic Separation Schemes; a recommended Deep-Water Route; Areas to be Avoided; and amendments to existing Traffic Separation Schemes” with some corrections to the description, as set out in annex 6, and instructed the Secretariat to forward it to the twenty-fourth session of the Assembly for adoption, as authorized by MSC 80. The proposed routeing measures will enter into force at 0000 hours UTC on [1 July 2006] after adoption by the Assembly.

**Other matters**

3.52 The delegation of the United Kingdom stated that a number of proposals discussed and agreed by the Working Group had touched upon issues that could potentially create doubts in the minds of mariners due to lack of clarity, in particular:

- .1 the use of an inshore traffic zone contrary to COLREG Rule 10(d);
- .2 use of deep-water routes by vessels other than deep draught vessels; and
- .3 variation in definitions and conditions related to areas to be avoided and ship reporting systems,

and further requested that future proposals should apply standards and terminologies, to the design and conditions for use, that have global recognition in IMO documents and are therefore harmonized whenever possible.

3.53 The delegation of the United States stated that the Sub-Committee had considered the first mandatory Area to be Avoided based on a proposal by New Zealand. This proposal had been well documented with full justification and had enabled NAV 49 to consider and assess the important issues inherent to establish the first mandatory Area to be Avoided. In their view, there were two main factors that led to this conclusion. Firstly, that the area being regulated was fairly small and in accordance with paragraph 6.17 of the General Provisions on Ship’s Routeing (GPSR) which indicated that the area being regulated should be limited to what was essential in the interest of safety of navigation and the protection of the marine environment. Secondly and most importantly, it was indicated that transiting traffic was almost non existent, thereby conforming to the requirements of paragraph 3.6.2 of the GPSR. In the view of the

United States, while having no objection, in principle, to future proposals for ATBAs, the establishment of mandatory ATBAs should be an exception rather than the rule and they, therefore, proposed that before such an area was approved, a stringent review should be carried out to ensure that the proposal met the criteria laid down in the GPSR, SOLAS regulation V/10 and MSC/Circ.1060, as well as the two points mentioned above. Accordingly, they would be making relevant submissions to MSC 81 and NAV 52.

3.54 A number of delegations supported the views expressed by the United Kingdom and the United States and agreed that there was a need to provide additional guidance, as proposed. The Sub-Committee agreed it might be necessary to amend the GPSR including the Guidelines and Criteria for Ship Reporting Systems.

3.55 Some delegations expressed the opinion that since some Areas to be Avoided were proposed on account of environmental reasons, it would be appropriate to also involve the Marine Environment Protection Committee in the process of either amending the GPSR and Guidelines and Criteria for Ship Reporting Systems or providing additional guidance on the matter.

3.56 In this context, the Sub-Committee noted that for amendments to the General Provisions on Ships' Routeing (GPSR) (resolution A.572(14), as amended) and Guidelines and Criteria for Ship Reporting Systems (resolution MSC.43(54), as amended by resolutions MSC.111(73) and MSC.189(79)), it would be necessary to submit a request for a new work programme item in accordance with the Guidelines on organization and method of work of the Maritime Safety Committee and Marine Environment Committee (MSC/Circ.1099 MEPC/Circ.405) to the Committee for approval and invited Member Governments to take the above views into account when submitting comments and proposals for consideration at NAV 52 and/or MSC 81.

#### **4 REVISION OF THE PERFORMANCE STANDARDS FOR INS AND IBS**

4.1 The Sub-Committee observed that MSC 78 had considered document MSC 78/24/2 (Germany) proposing to revise the performance standards for an integrated navigation system (INS) (resolution MSC.86(70), annex 3) to allow for the proper application of a SOLAS regulation V/15; and document MSC 78/24/16 wherein Norway, supporting the proposal by Germany, proposed also that not only the Performance standards for INS but the entire Performance standards for the integrated bridge system (IBS) (resolution MSC.64(67), annex 1) be revised, since an IBS was a combination of these systems. Following debate, the Committee decided to include, in the NAV Sub-Committee's work programme, a high priority item on "Revision of the performance standards for INS and IBS", with two sessions needed to complete the item; and instructed the Sub-Committee to consider whether revised single or separate standards should be developed and to take into account a pertinent outcome of the Working Group on Human Element.

4.2 The Sub-Committee recalled that, at its fiftieth session, it had noted that MSC 78 (MSC 78/26, paragraph 18.12.5) had agreed that there was no need to develop a new instrument to demonstrate compliance with SOLAS regulation V/15 and instructed it to take the above into account when considering documents MSC 78/11/3 (IACS) and MSC 78/11/4 (Republic of Korea). NAV 50 had also been of the opinion that both the documents MSC 78/11/3 and MSC 78/11/4 were of some relevance to the new work programme item "Revision of the performance standards for INS and IBS".

4.3 The Sub-Committee also recalled that the IACS observer had informed NAV 50 that the IACS Unified Interpretation 181, submitted as document MSC 78/11/3, had been amended in co-operation with the Republic of Korea to ensure that their concerns relating to MSC/Circ.982 expressed in their paper MSC 78/11/4, and the additional comments made during the plenary discussion, were fully covered. The Unified Interpretation (UI) was further reviewed in co-operation with Germany to ensure that the UI covered all the applicable parts of MSC/Circ.982 and that this revised UI would be submitted to MSC 79 and NAV 51.

4.4 The IACS observer advised the Sub-Committee that UI 181 was undergoing further review. The current version had been placed on the IACS website for external review purposes, and comments were welcome. It is intended to submit an agreed version to NAV 52. The Sub-Committee Chairman welcomed this and expressed his appreciation.

4.5 The Sub-Committee further recalled that, at its fiftieth session, with a view to progressing the matter further intersessionally, it had established a correspondence group under the co-ordination of Germany. The Correspondence Group had been tasked to give preliminary consideration to the revision of the performance standards for INS and IBS and advise the Sub-Committee. Members were invited to provide their comments and relevant proposals to NAV 51 to progress the issue.

#### **Review of performance standards for INS and IBS**

4.6 The Sub-Committee briefly discussed the documents by Germany (NAV 51/4), the co-ordinator of the Correspondence Group for INS and IBS, IEC (NAV 51/4/1) and Japan (NAV 51/4/4).

4.7 The Sub-Committee agreed to refer the above documents to the Technical Working Group to be established under agenda items 4, 9, 12 and 15.

#### **Draft standard IEC 62287 Ed.1.0**

4.8 The Sub-Committee briefly discussed documents by IEC (NAV 51/4/2) and Sweden (NAV 51/4/3) including the oral information provided by the United Kingdom with respect to Intellectual Property Rights (IPR) issues associated with Recommendation ITU-R M.1 371-1 on AIS.

4.9 The Sub-Committee considered documents NAV 51/4/2 (IEC) and NAV 51/4/3 (Sweden) concerning AIS Class B equipment for non-SOLAS craft and noted, in particular, that the IEC was preparing a draft standard IEC 62287 using the CSTDMA, technology different from the SOTDMA technology used by Class A (SOLAS) AIS.

4.10 The Sub-Committee further noted that Class B technology would work as well as Class A but there were some concerns regarding patent right issues.

4.11 The Sub-Committee also agreed to refer documents NAV 51/4/2 and NAV 51/4/3 to the Technical Working Group.

## Establishing the Technical Working Group

4.12 Having also considered agenda items 9, 12 and 15, 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, taking into account any decisions of, and comments and proposals made in Plenary, undertake the following tasks:

- .1 consider NAV 51/4 (paragraphs 5,6,7,8, 9 and annex), NAV 51/4/1 (paragraph 3 and annex) and NAV 51/4/4 (paragraphs 4, 5, 6, 7, 8, 9 and annex) and provide any comments and guidance on:
  - .1 the recommendations for the revision of INS and IBS performance standards including the draft amended structure of the INS performance standard (agenda item 4); and
  - .2 the recommendation for the development of performance standards for a Bridge Alarm Management System (BAMS) and whether it could be a part of IBS (agenda item 4);
- .2 prepare revised Terms of reference for the Correspondence Group on INS and IBS issues to progress work intersessionally for NAV 52 (agenda item 4);
- .3 consider NAV 51/4/2 (IEC) and NAV 51/4/3 (Sweden) and provide any comments, as appropriate on the draft standard IEC 62287 Ed.1.0 concerning AIS Class B equipment for non-SOLAS craft developed by IEC from the operational/functional point of view and in conjunction with Intellectual Property Rights (IPR) issues (agenda item 4);
- .4 prepare, as appropriate, recommendations, opinions and liaison statements to appropriate ITU bodies in relation to NAV 51/INF.8 (agenda item 9);
- .5 consider NAV 51/12 and provide any comments on the future course of action with respect to the development of the Galileo system (agenda item 12);
- .6 consider NAV 51/15 and NAV 51/15/1 and provide any comments and guidance:
  - .1 on the revision of the performance standards for shipborne VDRs and S-VDRs with a view to standardizing the methods of downloading and playback of data (agenda item 15); and
  - .2 based on the text provided (NAV 51/15/1, paragraph 18.2, annex), finalize a draft SN circular on Means for extracting stored data from Voyage Data Recorders and Simplified Voyage Data Recorders (agenda item 15);
- .7 prepare terms of reference of the correspondence group on VDRs and S-VDRs to progress work on this issue for NAV 52 (agenda item 15);

- .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 morning.

### **Report of the Technical Working Group**

4.13 Having received and considered the Technical Working Group's report (NAV 51/WP.3/Add.1), the Sub-Committee (with reference to paragraphs 6.1 to 6.10 and 8.1 to 8.4) took action as summarized hereunder.

### **AIS matters**

4.14 The Sub-Committee agreed with the Group's opinion that low-cost AIS devices, affordable for non-SOLAS vessels and pleasure craft, involving both SOTDMA and CSTDMA technology, and harmoniously operating with Class A devices, with a view to improve safety of navigation in general and safety of life at sea, in particular, should be developed as a matter of urgency. Therefore, Member Governments were invited to actively participate in the work of IALA, ITU, IEC and other organizations dealing with the issue.

### **Review of performance standards for INS and IBS**

4.15 The Sub-Committee agreed with the conclusions of the correspondence group that work should begin with a revision of INS performance standards and with a revision of the IBS performance standards following. The Sub-Committee also agreed with the correspondence group that performance standards for a bridge alarm management system were also required but was of the opinion that they could form a part of INS performance standards.

4.16 The Sub-Committee, therefore, agreed to the revised draft structure of performance standards for INS together with terms of reference for the correspondence group to prepare the work under the leadership of Germany\*, as given in annex 7.

4.17 The Sub-Committee noted document NAV 51/4/1 (IEC) concerning the results of studies on task orientated displays.

---

\* **Co-ordinator:**  
Dipl.-Ing. Florian Motz  
Department  
Ergonomics and Information Systems  
Research Institute for Communication,  
Information Processing and Ergonomics  
Neuenahrer Straße 20  
53343 Wachtberg-Werthhoven  
Germany  
Telephone: + 49 - (0)228 / 9435 - 271  
Telefax: + 49 - (0)228 / 9435 - 508  
E-mail address: [motz@fgan.de](mailto:motz@fgan.de)

## **5 REVIEW OF THE 2000 HSC CODE AND AMENDMENTS TO THE DSC CODE AND 1994 HSC CODE**

5.1 The Sub-Committee recalled that, at its fiftieth session, it had considered document NAV 50/5 (Secretariat) concerning the essence of MSC/Circ.1057 (proposed amendments to update the DSC Code and the 1994 HSC Code) including an application of the Codes. It had noted that the:

- .1 2000 HSC Code applies to HSC the keels of which are laid or which are at a similar stage of construction on or after 1 July 2002;
- .2 1994 HSC Code applies to HSC constructed on or after 1 January 1996 but before 1 July 2002;
- .3 DSC Code applies to DSC/HSC constructed before 1 January 1996; and
- .4 Chapter 13 – Shipborne navigational systems and equipment and voyage data recorders of the 2000 HSC Code is equivalent to SOLAS chapter V, as amended (up to and including resolution MSC.99(73)), which should be incorporated into the 1994 HSC Code and the DSC Code as indicated in MSC/Circ.1057.

5.2 The Sub-Committee also recalled that, at its fiftieth session, it was of the opinion that SOLAS chapter V, as amended, should apply to all Codes and with a view to progressing the matter further intersessionally, had established a correspondence group under the co-ordination of Norway to report to NAV 51. The task of the Correspondence Group was to develop draft amendments on shipborne navigational systems and equipment, which should be incorporated into the 1994 HSC Code and the DSC Code as indicated in MSC/Circ.1057.

5.3 The Sub-Committee considered document NAV 51/5 (Norway), summarizing the work completed by the above Correspondence Group and noted its conclusions with respect to the 2000 HSC Code, the DSC Code, and 1994 HSC Code, namely that with respect to the:

### **.1 2000 HSC Code**

Chapter 13 – Shipborne navigational systems and equipment and voyage data recorders of the 2000 HSC Code was equivalent to SOLAS chapter V, as amended (up to and including resolution MSC.99(73)). Since MSC/Circ.1057 contained no proposals to amend the 2000 HSC Code, the Correspondence Group as a consequence had not developed any proposals to amend the 2000 HSC Code;

### **.2 Amendments to the DSC Code**

The Correspondence Group drew the attention to the references in MSC/Circ.1057 to the paragraphs in the DSC Code, as the paragraphs in the circular did not take into consideration the amendments to the DSC Code as contained in resolution MSC.37(63). The paragraphs in the proposed amendments therefore needed to be renumbered, as given in the annex to document NAV 51/5. No other amendments, additional to what is contained in MSC/Circ.1057, were developed in relation to the DSC Code; and

### **.3 Amendments to the 1994 HSC Code**

Since MSC/Circ.1057 contained no proposals to amend shipborne navigational systems and equipment in relation to the 1994 HSC Code, consequentially, no proposals to amend the 1994 HSC Code were developed.

5.4 With respect to new paragraph 13.10 on Automatic Identification System (AIS), the delegation of the United States pointed out the relevance and validity of the time schedule specified for the provision of an Automatic Identification System (AIS) to dynamically supported craft.

5.5 After some discussion, the Sub-Committee agreed to replace the phase-in schedule as proposed in MSC/Circ.1057 with a new date of [1 January/July 2008].

5.6 The Sub-Committee was of the opinion that there was no need for additional amendments to the Codes referred to in paragraph 5.3 above.

5.7 The Secretariat was instructed to convey the above outcome of the Sub-Committee's deliberations on the matter and the agreed proposed amendments to the DSC Code (NAV 51/5, annex), as given in annex 8, to DE 49.

5.8 The Committee was invited to delete the item "Review of the 2000 HSC Code and amendments to the DSC Code and 1994 HSC Code" from the Sub-Committee's work programme, as the work on this item had been completed.

## **6 EVALUATION OF THE USE OF ECDIS AND ENC DEVELOPMENT**

6.1 The Sub-Committee recalled that MSC 78 had referred the documents by Australia (MSC 78/24/3), Norway (MSC 78/24/17) and France (MSC 78/24/18) to it and decided to include, in its work programme and the provisional agenda for NAV 51, a high priority item on "Evaluation of the use of ECDIS and ENC development", with two sessions needed to complete the item; and also instructed NAV 50 to give preliminary consideration to the matter.

6.2 The Sub-Committee recalled that, at its fiftieth session, it had considered in general the outcome of MSC 78 and the above submissions. During a preliminary exchange of views there was support, in general, for the principle behind the Australian proposal, i.e. to encourage the use of ECDIS on a world-wide basis. At the same time, the concerns put forward by Norway and France were also recognized by most delegations. NAV 50 recognized that a number of issues needed to be considered and discussed before any decision on a revision of the performance standards of ECDIS including the carriage and backup requirements could be taken.

6.3 The Sub-Committee also recalled that, at its fiftieth session, it had established a correspondence group under the co-ordination of Norway, which had been tasked to give consideration to documents MSC 78/24/3, MSC 78/24/17 and MSC 78/24/18 and exchange preliminary views on the following subjects:

- .1 conditions for possible introduction of ECDIS carriage requirements;
  - schedule for phase-in;
  - ship types affected;
- .2 possible authorization of use of ECDIS in RCDS mode without a requirement to carry an appropriate portfolio of paper charts;
- .3 indication of acceptance of RNCs by individual coastal States based on the survey to be conducted by IHO as requested by NAV 50;
- .4 definition of, and/or criteria for, the term “appropriate portfolio of paper charts”;
  - when ECDIS is used in the RCDS mode;
  - as ECDIS backup;
- .5 instruments required to monitor the promulgation of official digital charts and paper charts related to ECDIS operation, and provide this information to interested parties; and
- .6 consider possible implications for IMO instruments;

and submit a report of its deliberations to NAV 51.

6.4 NAV 50 had also welcomed the offer from the IHO observer to evaluate together with its members if, and to what extent, coastal waters were adequately covered by RNC in relation to safety of navigation and decided to request IHO to evaluate the extent of world-wide ENC coverage and present the outcome of the evaluation to NAV 51. Members were invited to provide their comments and relevant proposals to NAV 51 to progress the issue.

6.5 The Sub-Committee observed that Greece and IHO (MSC 80/21/2) had submitted a proposal to MSC 80, outlining some amendments/improvements to the ECDIS performance standards (resolution A.817(19), as amended) and that the Committee had added a new high priority item on its work programme with a target completion date of 2007 (paragraph 16.2.1 refers).

6.6 Accordingly, the Sub-Committee agreed that it would be more appropriate to consider the amendments to the ECDIS performance standards, proposed by the Correspondence Group in conjunction with the all other amendments, as proposed in document MSC 80/21/2, at NAV 52 and that NAV 51 should only concentrate on the other remaining issues outlined in document NAV 51/6, paragraph 21.

6.7 The document by the Russian Federation (NAV 51/6/2) referring mainly to the Performance Standards was, therefore, introduced in plenary, but its consideration was deferred to NAV 52, with some relevant parts being referred to the Working Group for consideration.

6.8 The delegation of Norway, as co-ordinator of the Correspondence Group (NAV 51/6), emphasized in particular the opinion of the Group that there was a sound basis to implement a phased carriage requirement for ECDIS for certain types of ships. A phase-in programme for the carriage of ECDIS would provide certainty and clear direction to mariners, data distributors, equipment manufacturers and Hydrographic Offices. These measures would also accelerate the

use and support of ECDIS which would benefit mariners and at the same time contribute to increasing the rates of ENC production.

6.9 In considering the report of the Correspondence Group, some delegations supported the phased-in approach for a carriage requirement for ECDIS for certain types of ships, with priority being given to High-Speed Craft.

6.10 Some delegations observed that the use of unofficial electronic charts was increasing and had apparently led to several recent casualties.

6.11 The Sub-Committee invited Members to submit relevant statistics on this issue to NAV 52.

6.12 In opposing a possible carriage requirement, some delegations noted the present shortfall in the coverage of ENCs world-wide and stated that a full FSA on the use of ECDIS should be carried out before the consideration of any carriage requirement for ECDIS, which was premature to consider at this stage.

6.13 Some delegations also noted that there were limitations to the use of ECDIS as well as training and qualification implications. There were also questions as to some flag and coastal States' interpretation and coastal State jurisdiction with regard to what constituted an "appropriate folio of up-to-date paper charts", when ECDIS was operated in the RCDS mode in areas where ENCs were not available.

6.14 The IHO observer (NAV 51/6/1 and NAV 51/INF.4) emphasized in particular that whilst there were clearly shortcomings in the coverage and availability of ENCs the number available to the mariner had increased considerably in the last year and there was every indication that this rate of increase would continue. In their view, any adoption of mandatory carriage requirements by IMO would further stimulate production of ENCs.

6.15 The delegation of Japan (NAV 51/6/3) stated that there was no doubt that the role of ECDIS and its contribution to the safety of navigation led to environmental protection, and therefore Japan had already developed ENCs for all Japanese coastal areas.

The Japanese delegation recognized, however, that it was in their opinion premature to introduce mandatory carriage of ECDIS, for the following two reasons:

- .1 lack of evaluation on cost effectiveness based on FSA, in particular, for cargo ships; and
- .2 lack of coverage by ENCs in specific areas and regions, as well as the fact that many authorities do not accept the use of ECDIS in RCDS mode for safety reasons.

These situations would force ships to carry on board both paper charts and ECDIS without ENCs in many areas and regions which was an improper burden. The above view was supported by many delegations.

### **Establishing a Working Group on ECDIS**

6.16 The Sub-Committee agreed to establish a Working Group on ECDIS and refer documents NAV 51/6, NAV 51/6/1, NAV 51/6/2 and NAV 51/6/3 for consideration.

6.17 The Working Group was instructed:

- .1 to review the report of the Correspondence Group on ECDIS (NAV 51/6), taking into account the proposals outlined in documents NAV 51/6/1 (IHO), relevant parts of NAV 51/6/2 (Russian Federation) and NAV 51/6/3 (Japan), including comments and decisions made in Plenary; and provide relevant comments, as appropriate, on the following:
  - .1 the proposed amendments to SOLAS regulation V/19, namely the insertion of a footnote to subparagraph 2.1.5, to reflect the clarifications and definitions to the term “Appropriate portfolio of up-to-date paper charts” as ECDIS backup regulation and the addition of a new paragraph 2.8 to consider a phased implementation of a possible carriage requirement for ECDIS (NAV 51/6, paragraphs 21.2 and 21.5, annex 1);
  - .2 consider the feasibility and possible criteria for an appropriate FSA on the use of ECDIS;
  - .3 the proposed amendments to the 2000 HSC Code chapter 13 to implement a phased mandatory carriage requirement for ECDIS (NAV 51/6, paragraphs 21.3, annex 2);
  - .4 the support for the IHO initiative to establish a comprehensive online catalogue of available official charts, to facilitate the determination of “appropriate portfolio of up-to-date paper charts”;
  - .5 the invitation to coastal States to consider which paper charts would meet the “appropriate portfolio of paper charts” in waters under their jurisdiction in consultation with the relevant hydrographic authorities and advise where ENCs did not exist and communicate this to IHO for inclusion in the online chart catalogue; and
  - .6 the need for reviewing SN/Circ.207 to ensure consistency with the proposed clarifications for “an appropriate portfolio of paper charts”;
- .2 to prepare revised Terms of reference for the Correspondence Group on ECDIS issues to progress work intersessionally for NAV 52; and
- .3 to prepare a progress report by Thursday, 9 June 2005 for consideration at Plenary.

### **Report of the Working Group on ECDIS**

6.18 Having received and considered the report of the Working Group on ECDIS (NAV 51/WP.4), the Sub-Committee (with reference to paragraphs 5 to 20) took actions as summarized hereunder.

6.19 The delegation of Panama supported by a number of delegations queried whether the Terms of Reference as given to the Group clearly reflected the outcome of the debate in the Plenary. In their view the Plenary had agreed that there should be no discussion of a mandatory

carriage requirement for ECDIS in the Working Group and yet it had appeared in document NAV 51/WP.4. Consequently paragraph 2 of annex 1 should not be part of the report.

6.20 The delegation of the United Kingdom supported by a number of delegations was of the view that the Terms of Reference as given to the Group did reflect the outcome of the debate in Plenary and that the Working Group had carried out these instructions and, as was referred to in the Working Group report, only discussed in general a possible carriage requirement. Paragraph 2 to annex 1 had therefore correctly not been given any status by the Group.

6.21 In an extensive debate, the Sub-Committee was divided on the issue whether or not the Working Group had stayed within its remit. At the same time the Sub-Committee agreed that the issue of mandatory carriage requirement was not on its agenda and work programme and should therefore not be further progressed until the Committee had taken a decision thereon.

6.22 In view of the above divided opinion on the Terms of Reference of the Working Group, the Director of the Maritime Safety Division stated that, according to his record:

- .1 the Chairman of the Sub-Committee, when summarizing the debate on the outcome of the Correspondence Group and the carriage requirements of ECDIS included in that report, stated that consideration on mandatory carriage requirements was at present outside the work programme assigned by the Committee and, therefore, the Working Group should not be instructed to consider mandatory carriage requirements for ECDIS. This was reflected in the Terms of Reference of the Working Group which were orally introduced by the Chairman at the time of the debate in plenary and the expression “to consider a phased implementation of a **possible** carriage requirement for ECDIS” was used in the Terms of Reference;
- .2 having settled the Terms of Reference and after discussion of other relevant issues, the Chairman, upon the request of the delegation of Panama for clarification of the Terms of Reference, confirmed that the Working Group was not to deal with mandatory carriage requirements for ECDIS and also conveyed this to the Chairman of the Working Group; at this stage the Sub-Committee did not discuss the Terms of Reference further;
- .3 the above developments might have left some ambiguity regarding the mandate of the Working Group and contributed to the divided opinion as reflected above; i.e. one group of delegations considered that any form of phased implementation schemes should not be discussed in the Working Group because such schemes could be considered in the context of the mandatory carriage requirements, while another group of delegations considered that, since the Sub-Committee had agreed to instruct the Working Group to consider not mandatory but possible carriage requirements for ECDIS, such issues were permitted to be discussed in the Working Group; and
- .4 since the deliberation of the Working Group had been progressed on the above basis, the Sub-Committee should, therefore, only accept the state of developments in the Working Group and should proceed to take the action requested in accordance with paragraph 21 of the Working Group report (NAV 51/WP.4).

6.23 The Sub-Committee Chairman concurred with the statement of the Director of the Maritime Safety Division.

### **Proposed amendments to SOLAS regulation V/19**

6.24 Following extensive discussion, the Sub-Committee agreed, subject to the endorsement of MSC 81, to revise the existing footnote to regulation V/19.2.1.5 as follows:

“Paper nautical charts sufficient to meet the requirements of subparagraph .4 and regulation 27 may be used as a back-up arrangement for ECDIS. Other back-up arrangements for ECDIS are acceptable (see appendix 6 to resolution A.817(19), as amended)”

to reflect the clarifications and definitions to the term “Appropriate portfolio of up-to-date paper charts” as ECDIS back-up. The Secretariat was instructed to ensure that when the next SOLAS consolidated edition is published, the existing footnote to regulation V/19.2.1.5 is replaced by the aforementioned text.

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

### **Proposed amendments to the 2000 HSC Code**

6.26 The Sub-Committee approved the proposed amendments to the 2000 HSC Code Chapter 13 to implement a phased possible carriage requirement for ECDIS for High-Speed Craft for submission to the Committee with a view to adoption, as given at annex 9.

6.27 The Sub-Committee was of the opinion that the 1994 HSC Code and the DSC Code also should be amended accordingly.

### **Formal Safety Assessment**

6.28 With respect to the feasibility of an appropriate FSA on the safety benefits of the carriage of ECDIS, the Sub-Committee was of the view that such an analysis was feasible and desirable. It was recognized that there were a number of factors which needed to be taken into account in assessing the benefits, costs and risks so as to ensure that the results of any Formal Safety Assessment are meaningful.

These factors included, but were not limited to:

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

### **IHO online catalogue**

6.29 The Sub-Committee appreciated and expressed support for the IHO initiative to establish a comprehensive online catalogue of available official charts, which will facilitate the determination of “appropriate folio of up-to-date paper charts”. The Sub-Committee was also of the view that the IHO should be invited to include the following in the catalogue:

- availability of ENCs
- availability of RNCs
- availability of official paper charts (as defined in SOLAS regulation V/2.2)
- list of charts compiled from inputs by coastal States as “appropriate folio of up-to-date paper charts” as supplementary to ECDIS working in RCDS mode.

A preliminary draft specification for the IHO online catalogue, to be considered by the intersessional Correspondence Group, is given at annex 10. The Sub-Committee also noted that RNCs should not be shown in the catalogue where ENCs were available.

### **Coastal States**

6.30 The Sub-Committee endorsed the view of the Working Group that Member States should be invited to consider which paper charts would meet the “appropriate folio of up-to-date paper charts” in territorial seas and where ENCs did not exist, and communicate this information to the International Hydrographic Organization for inclusion in the online chart catalogue. Member States were advised to consult the relevant hydrographic authorities in the determination of this guidance. The Sub-Committee also noted that where derived charts were produced in coastal waters under bilateral agreements, these would meet this requirement in the same way as the equivalent national charts.

6.31 In considering what waters the coastal State should cover when advising an appropriate folio of up-to-date paper charts, the Sub-Committee was of the view that this was only relevant in territorial seas not covered by ENCs and transiting ships should seek the advice of the coastal State.

6.32 The Sub-Committee observed that under UNCLOS the only States which had a right to specify such a carriage of charts were, under the port entry provisions i.e the coastal State of departure and destination and that the flag State was responsible in other areas, including for transiting ships, for which ships the advice of the coastal State should be sought.

6.33 The Sub-Committee agreed that while the IHO had developed the International chart series to cover the needs of international shipping with different scale charts, the legal regime for the EEZ and other waters outside the territorial sea, was complex and was not easily quantified in respect of the specification of the carriage of particular charts.

### **SN/Circ.207**

6.34 The Sub-Committee considered the need to review SN/Circ.207 to ensure consistency with the proposed clarifications for “an appropriate folio of up-to-date paper charts” and was of the view that while a review of the circular was necessary to update it in the light of experience, it would be premature to revise it at present in view of the revision of the Performance Standards of ECDIS as from NAV 52.

## Terms of Reference of the Correspondence Group

6.35 The Sub-Committee agreed that, to progress the work for NAV 52, an intersessional Correspondence Group should be established under the leadership of Norway\* and approved draft terms of reference for the group, as amended and given at annex 11.

## Text of the report of the Working Group to be posted on the IMO website

6.36 In the discussion on the outcome of the Working Group and the divided opinion on the Terms of Reference of the Working Group, a concern was expressed whether the original text of the report of the Working Group (NAV 51/WP.4) should be posted on the IMO website, since it had become the practice of the Organization to post the text of working papers there.

6.37 Having noted the decision of C/ES.22 that all working papers approved by the Sub-Committee in plenary should be posted on the IMO website, the Sub-Committee debated whether the original text of the report should be posted or only the version which could be approved by the Sub-Committee. Having discussed several options to deal with this matter, the Sub-Committee agreed to post the text of the report with the deletion of paragraphs 2 and 3 of annex 1 (NAV 51/WP.4/Rev.1 was posted by the Secretariat as instructed by the Sub-Committee).

6.38 The delegation of France reserved its position on the principle of amending the report of the Working Group.

## 7 REVIEW OF THE OSV GUIDELINES

7.1 The Sub-Committee noted that SLF 47 had considered the outcome of the Correspondence Group on Intact Stability (IS) (SLF 47/6/9, paragraph 13) on the matter, together with documents SLF 47/7 and SLF 47/7/1 (Australia) and SLF 47/7/2 (Secretariat) and agreed to use the annex to document SLF 47/7 as a basis for its deliberations. Having reviewed the changes proposed in the annex to document SLF 47/7 in detail, SLF 47 agreed to:

- .1 retain paragraphs 1.1.4 and 1.1.6;
- .2 further consider the definition for “near coastal voyages” at SLF 48 with a view to providing a more precise definition;
- .3 transfer sections 2.1 to 2.4, 2.5 (part), 2.6, 2.7 (part), 2.8 to 2.10 to the IS Code;

---

\* **Co-ordinator:**  
Principal surveyor Mr. Baard Thingstad  
Norwegian Maritime Directorate  
P.O. Box 8123 Dep.  
N-0032 Oslo  
Norway  
Telephone: +47 22 59 18 13  
Telefax: +47 52 73 10 00  
Mobile: +47 95 74 17 22  
E-mail address: [bht@sjofartsdir.no](mailto:bht@sjofartsdir.no)

- .4 further consider sections 3 and 8 at SLF 48; and
- .5 give consideration to sections 4 to 7 at SLF 48 with a view to eliminating any vague text,

and instructed the Secretariat to provide a clean version of the draft Guidelines, based on the above decisions, for consideration at the next session. Member Governments and international organizations were invited to submit comments and proposals to SLF 48. The Secretariat was instructed to inform the BLG, DSC, COMSAR, NAV and DE Sub-Committees, involved in the revision of the Guidelines on the above outcome.

7.2 The Sub-Committee considered document NAV 51/7 (Secretariat) providing details on the decisions of SLF 47 relevant to its work concerning operational precautions against capsizing. After some discussion and recognizing that General precautions against capsizing were already covered in Chapter 2, section 2.5 whilst operational procedures against capsizing were already covered in Chapter 4, section 4.5.5 of the existing Code on Intact Stability and in Chapter 4 of the draft Intact Stability Code being developed by the SLF Sub-Committee, the Sub-Committee concluded that there was no need for any further related amendments.

7.3 The Secretariat was instructed to convey the above outcome of the Sub-Committee's deliberations on the matter to SLF 48.

7.4 The Committee was invited to delete the item "Review of the OSV Guidelines" from the Sub-Committee's work programme, as the work on this item had been completed.

## **8 REVIEW OF THE SPS CODE**

8.1 The Sub-Committee noted that MSC 78 had considered the need to update the Code of safety for special purpose ships (SPS Code) to reflect recent amendments to SOLAS chapter III and the adoption of the LSA Code.

8.2 The Sub-Committee also noted that MSC 78 had recalled that, since the SPS Code was adopted in 1983, many relevant requirements of the SOLAS Convention had been amended and considerable experience had been gained in the Code's application. Therefore, the Committee considered that this might be a good opportunity for a review of the whole of the SPS Code and agreed to include a high priority item on "Review of the SPS Code", with two sessions needed to complete the item, in the work programmes of the DE (co-ordinator), COMSAR, DSC, FP, NAV and SLF Sub-Committees.

8.3 The Sub-Committee was reminded that the SPS Code has been amended twice since 1983; in 1996 by MSC/Circ.739 and in 2004 by resolution MSC.183(79).

8.4 The Sub-Committee considered document NAV 51/8 (Secretariat) providing the existing text of Chapter 10 of the existing Code of safety for special purpose ships (SPS Code) and after some discussion, agreed to the proposed draft model text of Chapter 10 as follows:

### **"CHAPTER 10 - SAFETY OF NAVIGATION**

The special purpose ships should comply with the provisions of chapter V of the 1974 SOLAS Convention as amended."

8.5 The Secretariat was instructed to convey the above outcome of the Sub-Committee's deliberations on the matter to DE 49.

8.6 The Committee was invited to delete the item "Review of the SPS Code" from the Sub-Committee's work programme, as the work on this item had been completed.

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

### **Compatibility of radionavigation and radiolocation services operating in the bands 9 000-9 200 MHz and 9 300-9 500 MHz**

9.1 The Sub-Committee recalled that, at its forty-ninth session, it had considered document NAV 49/10 (Secretariat) containing a draft new ITU-R question concerning compatibility of radionavigation and radiolocation services operating in the bands 9 000–9 200 MHz and 9 300–9 500 MHz and pointed out that the band 9 300–9 500 MHz was of great importance and interest as the 9 GHz (X-band) marine radars and SAR radar transponders operate in this band. Being informed that the ITU Radiocommunication Assembly in May 2003 adopted this new question and assigned it to Study Group 8 for finalization by 2006, NAV 49 had invited the Committee to extend the target completion date for this item to 2006. Taking into account the importance of the matter for the safety of life at sea, Member Governments had been invited to actively participate in the study to be carried out in the ITU and submit their comments and proposals to NAV 50 for consideration.

9.2 The Sub-Committee noted that, at its fiftieth session, the Secretariat (NAV 50/10) had also brought to its attention a revised question adopted by Study Group 8, concerning the technical and operational compatibility of radionavigation and radiolocation services operating in the bands 9 000–9 200 MHz and 9 300–9 500 MHz. This matter was still under consideration by ITU would be further considered at the 17<sup>th</sup> meeting of WP.8B during September 2005.

9.3 The Sub-Committee also noted the information provided by the Secretariat (NAV 51/INF.8) and agreed to refer document NAV 51/INF.8 to the Technical Working Group for consideration and comments, as appropriate.

9.4 The Sub-Committee further noted that the meeting of a Joint IMO/ITU Experts Group on maritime radiocommunication matters was scheduled from 13 to 15 June 2005, at IMO Headquarters, which could further review the IMO position concerning agenda item 1.3 of WRC-07.

### **Report of the Technical Working Group**

9.5 Having received and considered the Technical Working Group's report (NAV 51/WP.3), the Sub-Committee (with reference to paragraphs 3.1 and 3.2) agreed with the Group's opinion that initially there was no problem with the proposed draft CPM text and invited the IMO/ITU Experts Group, meeting from 13 to 15 June 2005 at IMO Headquarters, to consider NAV 51/INF.8 as well.

## **10 PASSENGER SHIP SAFETY: EFFECTIVE VOYAGE PLANNING FOR PASSENGER SHIPS**

10.1 The Sub-Committee noted that, at its fiftieth session, it had established a Working Group with a view to reviewing the Sub-Committee's tasks for large passenger ship safety and approved the Working Group's report (NAV 50/WP.4) in general and, in particular:

- .1 invited the STW Sub-Committee to note the group's discussion on matters related to the review of pilot and bridge team interface management and bridge team resources;
- .2 endorsed the group's opinion that IHO should be invited to keep the Sub-Committee informed of their on-going work related to the quality and availability of hydrographic information for operation in remote areas;
- .3 endorsed the work to be undertaken for the tasks assigned to the Sub-Committee on large passenger ship safety, set out in annex 13, for forwarding to MSC 79;
- .4 noted the group's views regarding the FSA study submitted by Norway;
- .5 agreed to re-establish the Drafting Group on Large Passenger Ship Safety at the next session; and
- .6 invited the Committee to extend the target completion date to 2006.

10.2 NAV 50 had also invited IHO to advise NAV 51 on the progress made and any specific actions that needed to be undertaken for the improvement of the surveying, cartographic and navigational coverage of remote areas including the development of relevant guidelines/requirements, to ensure the safety of navigation. Members were invited to provide their comments and relevant proposals to NAV 51 to finalize the issue.

10.3 The Sub-Committee recalled that MSC 79 agreed that the word "large" should be deleted from the title of this agenda and that the working group and subsidiary bodies should continue to develop relevant parameters, as necessary, for application purposes of any proposed requirements and recommendations, bearing in mind that a "one size fits all approach" should be avoided since each area of safety (i.e. fire, machinery, stability, lifesaving, search and rescue, etc.) had different concerns. In considering the outcome of NAV 50 and SLF 47, MSC 79 endorsed, in general, the group's decisions on the work to be undertaken on matters related to passenger ship safety, as set out in annex 3 to document MSC 79/WP.13.

10.4 The Sub-Committee also recalled that MSC 79 had further approved the revised work plan, as set out in annex 3 to document MSC 79/WP.13, and forwarded it to the COMSAR, DE, FP, NAV, SLF and STW Sub-Committees for action as appropriate. MSC 79 had also conveyed the group's report, in its entirety, to the relevant sub-committees for background purposes and further instructed them to keep the Committee informed of their progress on matters assigned. MSC 79 had agreed to the revised guiding philosophy, strategic goals and objectives, as set out in annex 1 to document MSC 79/WP.13, and expressed the view that, taken as a total package, including the group's reports from previous sessions, there was enough information to allow the sub-committees to complete their assigned tasks by 2006.

10.5 The Sub-Committee also noted that DE 48 had invited the FP, NAV and SLF Sub-Committees to provide comments on the draft performance standards for the essential systems and equipment on passenger ships for safe return to port after a casualty and for three hour time to remain habitable after a casualty under their purview, set out in annexes 5 and 6 to document DE 48/WP.4, to DE 49.

10.6 The Sub-Committee further noted that MSC 80 had approved the revised work plan, as set out in the annex to document MSC 80/WP.11, as modified by MSC 80/WP.11/Corr.1, and forwarded it to the COMSAR, DE, FP, NAV, SLF and STW Sub-Committees for action as appropriate.

10.7 The Sub-Committee briefly considered documents by Norway (NAV 51/10), IHO (NAV 51/10/1) and Denmark (NAV 51/10/2).

10.8 The Sub-Committee considered with interest the results of the Norwegian FSA Study on navigational safety of large passenger ships. The delegation of Norway explained that navigational safety was chosen due to the fact that relevant statistics had shown that collision and grounding accounted for a substantial part of the losses resulting from ship accidents. The delegation further brought to the attention of the Sub-Committee that the FSA Studies had demonstrated that the following risk control options had been documented to be cost effective, representing a considerable potential for reducing the frequency of collision and grounding:

- .1 ECDIS (Electronic Chart Display and Information System);
- .2 TCS (Track Control System);
- .3 AIS (Automatic Identification System) integration with radar;
- .4 Improved bridge design; and
- .5 Improved navigator training.

In addition, the following risk control options were cost efficient, but with limited risk reduction effects:

- .1 Automatic logging of information;
- .2 Implementation of guidelines for BRM; and
- .3 Improved navigation system reliability.

All but the last of the recommended risk control options (RCO) had net economic benefits. This implied that the reduction in economic consequence exceeded the investment and the safety benefits were additional benefits. The delegation of Norway also pointed to the possible importance of some aspects of the study for further work on agenda item 6 – Evaluation of the use of ECDIS and ENC development.

10.9 Norway also referred to two RCOs having been calculated not to be cost-effective; i.e. “two officers on the bridge and “onboard security and safety centre”. However, recent decisions by the Maritime Safety Committee in relation to the value of the required index R for passenger ships, as well as new arguments indicating possibilities for significantly reducing the cost of these RCOs, are strong arguments for recalculating the cost-effectiveness of these two

RCOs. This has not as yet been possible, but Norway plans to do this recalculation in the near future.

10.10 There was a general discussion on the need for FSA studies for evaluating generic voyage planning. The Sub-Committee agreed that the FSA study had clearly demonstrated its usefulness with respect to specific areas/aspects of marine safety.

10.11 The Sub-Committee subsequently agreed that the draft framework outlined in the annex to document NAV 51/10/2 (Denmark) should be used for developing supplementary guidelines on voyage planning for passenger ships operating in remote areas, as a standalone document based on resolution A.893(21).

### **Establishing of a Drafting Group on Passenger Ship Safety**

10.12 The Sub-Committee established the Drafting Group and instructed it, taking into account any decisions of, and comments and proposals made in Plenary, undertake the following tasks:

- .1 to review the framework outlined in the annex to document NAV 51/10/2 (Denmark) along with resolution A. 893(21) – Guidelines for voyage planning, taking into account the outcome of MSC 80 (MSC 80/24, paragraphs 4.1 and 4.12 to 4.17), including comments and decisions made in Plenary; and develop draft supplementary guidelines on voyage planning for passenger ships operating in remote areas, as a standalone document based on resolution A.893(21);
- .2 in developing the supplementary guidelines, to give due consideration to awareness of water depth and squat issues, availability of international aids to navigation for vessels operating in remote areas, GMDSS and MSI broadcasts; and
- .3 to prepare a draft final text by Thursday, 9 June 2005 for consideration at Plenary.

### **Report of the Drafting Group**

10.13 Having received and considered the Drafting Group's report (NAV 51/WP.5), the Sub-Committee (with reference to paragraphs 3.1 to 4.1 (NAV 51/WP.5)) took action as summarized hereunder.

### **Development of draft supplementary guidelines on Voyage Planning for Passenger Ships operating in Remote Areas**

10.14 The Sub-Committee noted that the Drafting Group, in developing the draft Assembly resolution on Voyage and passage planning for passenger ships operating in remote areas, had taken into account the outcome of MSC 80, including the interdependency with COMSAR on the availability of SAR resources in remote areas. The draft resolution included the need for contingency plans for emergencies in view of the limited support available for assistance in remote areas. The Sub-Committee also noted that COMSAR was developing information on the availability of SAR services in remote areas. Water depth and squat issues had been addressed by including consideration of the source, age, and the quality of the hydrographic data in the appraisal phase. The availability of aids to navigation was also addressed in the appraisal phase, as was the limited availability of MSI data.

10.15 The Sub-Committee concurred with the views of the Drafting Group that there was no need to address GMDSS because it had been developed as a global system, covering also remote areas of the world, including Arctic and Antarctic regions as Area A4. Although the terms of reference of the Drafting Group were limited to passenger ships, the Sub-Committee further noted that the guidance developed could apply to any ship operating in remote areas, not just passenger ships.

10.16 The Sub-Committee endorsed the draft Assembly resolution, as amended and set out in annex 12, with a view to approval at MSC 81 for forwarding it to the twenty-fifth session of the Assembly for adoption. The Sub-Committee noted that the draft resolution, as a standalone document for passenger ships operating in remote areas, was intended to supplement resolution A.893(21), "Guidelines for voyage planning". Having reviewed resolution A.893(21), the Sub-Committee agreed that it was applicable to passenger ships operating in remote areas, and that it did not need to be amended or reproduced within the new resolution.

**Draft performance standards for essential systems and equipment on passenger ships for safe return to port after a casualty and for three hour time to remain habitable after a casualty**

10.17 The Sub-Committee considered document NAV 51/2/1 (Secretariat) on the draft performance standards for the essential systems under its purview, set out in the annexes to document NAV 51/2/1.

10.18 The Sub-Committee noted that MSC 80 had:

- .1 approved a definition for the new term "time for orderly evacuation and abandonment" (MSC 80/WP.11/Add.1/Rev.1, paragraph 7), as it would be better suited for the concept, in cases where casualty threshold for return to port was exceeded, there would be sufficient time for the safe and orderly abandonment of the ship; and
- .2 in considering the 3-hour timeframe for habitability agreed at MSC 78, it reiterated its previous decision that future passenger ships should be designed to meet the safe return to port concept after a casualty and that relevant casualty thresholds should be developed. However, in the event a casualty exceeded the above threshold, it endorsed the group's recommendation that an additional casualty scenario, for design purposes, should be developed by the FP and SLF Sub-Committees to support the concept that the ship would remain viable for at least 3 hours to allow for a safe and orderly evacuation and abandonment.

10.19 The Sub-Committee was of the opinion that the following essential systems were of relevance to the NAV Sub-Committee:

- .1 Essential systems and equipment on passenger ships for safe return to port after a casualty**
  - .1 steering systems and steering-control systems;
  - .2 navigation systems; and
  - .3 internal communications systems (bridge to engineering spaces);

**.2 Essential systems and equipment on passenger ships for three hour time to remain habitable after a casualty**

- .1 [steering systems and steering-control systems]; and
- .2 internal communications systems (bridge to engineering spaces).

10.20 The Sub-Committee agreed with the contents of the draft performance standards for the essential systems under its purview; however, with respect to navigation systems, the Sub-Committee was of the view that the contents should be re-worded to reflect the importance of navigation systems, as follows:

**“Navigation systems**

Equipment essential for navigation, position fixing and detection of risk of collision should also be available. The vessel should be capable of displaying the proper light configuration in compliance with the International Regulations for Preventing Collisions at Sea.”

10.21 The Secretariat was instructed to forward the amended text, as given in annex 13, to DE 49.

10.22 The Committee was invited to delete the item from the Sub-Committee’s work programme as the work on this item had been completed.

**11 MEASURES TO ENHANCE MARITIME SECURITY**

11.1 The Sub-Committee recalled that, at its fiftieth session, it had considered document NAV 50/12 (Secretariat) identifying the relevant instruments of concern to the Sub-Committee to be SOLAS chapter V, the COLREGs, the International Code of Signals and the Standard Marine Communication Phrases and was of the opinion that there was no need to amend any of the abovementioned instruments.

11.2 The Sub-Committee also recalled that NAV 50, recognizing that with the new maritime security regime having just entered into force on 1 July 2004, some operational security issues might be referred to it for review and comments, agreed to keep this agenda item on its work programme, and further recommended to the Committee for an extension of the target completion date to 2005.

11.3 The Sub-Committee noted that MSC 79 had concurred with the view of NAV 50 that, at this stage, there was no need to review with a view to including therein security-related provisions in anyone of the above instruments.

11.4 The Sub-Committee observed that no substantive documents have been submitted to this session and also no specific task had been allocated to it by either the Committee or any relevant Sub-Committee.

11.5 The Committee was invited to delete the item “Measures to enhance maritime security” from the Sub-Committee’s work programme as the work on this item had been completed.

## 12 WORLD-WIDE RADIONAVIGATION SYSTEM (WWRNS)

12.1 The Sub-Committee recalled that MSC 78 had considered document MSC 78/11/5 (European Commission), providing an update on the status of the Galileo Program, outlining plans to propose Galileo to IMO as a component of the World-Wide Radionavigation System (WWRNS) and describing the development of the necessary receiver performance standards to enable Galileo to be used by the maritime sector and agreed to forward document MSC 78/11/5 to NAV 50 for consideration. Referring to paragraph 3.8.1 of document MSC 78/24/12, MSC 78, in the context of resolution A.953(23) – *World-wide Radionavigation System*, had requested the Sub-Committee to recognize systems conforming with the requirements of the revised Report on the study of world-wide radionavigation system.

12.2 The Sub-Committee also recalled that, at its fiftieth session, it had considered documents submitted by the European Commission (NAV 50/13 and MSC 78/11/5), providing a preliminary assessment of the Galileo navigation service requirements; confirming that analyses performed so far in the Galileo programme indicated that it met all the requirements for oceanic, coastal, port approach and restricted waters operations (resolution A.915(22)); and including an update on the status of the Galileo programme and an outline on plans to propose Galileo to the Organization as a component of the World-Wide Radionavigation System (WWRNS).

12.3 The Sub-Committee further recalled that, at its fiftieth session, having further recognized the need to promote active discussion and finalization of the work in 2005, and to facilitate the incorporation of the mariners' views, it had established a correspondence group under the co-ordination of France to progress this work intersessionally and report to NAV 51 and agreed that the following issues needed to be addressed by this group namely:

- .1 a review of the preliminary draft receiver performance standards for the Galileo open service and the Galileo Integrity service; and
- .2 a review of the plans to propose Galileo to the Organization as a component of the World-Wide Radionavigation System.

12.4 The Sub-Committee considered document by France (NAV 51/12), as co-ordinator of the Correspondence Group for Galileo requesting the Sub-Committee to:

- .1 review for approval the amended draft standards for Galileo Open and Safety of Life service receivers attached as annexes A and B (paragraph 7); and
- .2 provide its views on the ability to shorten the recognition process for Galileo once the system becomes operational (paragraph 15).

12.5 At the request of the delegation of France, the Chairman explained that, since the work programme item only encompassed three specific sub-items, and performance standards for Galileo receivers were not explicitly mentioned, the Sub-Committee was not authorized to address the issue as per the Guidelines on the organization and method of work of the Committees and their subsidiary bodies. However to make progress on the issue, the Technical Working Group was instructed to consider document NAV 51/12 and provide the necessary justification for a corresponding new work programme item.

## **Report of the Technical Working Group**

12.6 Having received and considered the Technical Working Group's report (NAV 51/WP.3/Add.1), the Sub-Committee (with reference to paragraphs 7.1 to 7.4 and annex 3) took action as summarized hereunder.

12.7 The Sub-Committee concurred with the Group's opinion that both service receivers could be described in single performance standards and agreed that there was an urgency to complete the performance standards by 2006 in order to give time for industry to produce equipment for the Galileo system becoming operational in 2008.

12.8 The Sub-Committee also agreed to the revised performance standards together with the justification to include a new agenda item on "Performance standards for shipborne Galileo receiver equipment" in the Sub-Committee's work programme, given at annex 14, and was of the opinion that the performance standards should be finalized at NAV 52 (see paragraph 16.3.3).

12.9 Therefore, the Committee was invited to include the proposed new agenda item in the Sub-Committee's work programme.

12.10 The Sub-Committee agreed with the Group's view that the recognition process could be achieved in a timely manner once the system became operational. Therefore, the Galileo system operators were invited to commence the process as soon as they were able to do so.

## **13 CASUALTY ANALYSIS**

13.1 The Sub-Committee recalled that, following consideration of the proposal by STW 34 to delete the item on "Casualty analysis" from its work programme and to deal with the matter under the agenda item on "Any other business", MSC 77 had agreed to consider the matter, at its seventy-eighth session, taking into account the outcome of consideration, by the MSC Correspondence Group on FSA, of the application of the FSA methodology to the analysis of casualties.

13.2 The Sub-Committee also recalled that MSC 78, having noted the outcome of the aforementioned correspondence group, decided that the item on "Casualty analysis" should remain on the work programme of the sub-committees.

13.3 The Sub-Committee noted that STW 36 had considered results of casualty analyses related to training matters forwarded by FSI 12 (STW 36/16/7), and agreed that in the case of the Norwegian Dream/Ever Decent (Collision), the results would need to be considered by the NAV Sub-Committee before the STW Sub-Committee was able to decide on any additional training requirements. Since FSI 12 had not done so, STW 36 had forwarded these results to NAV 51 for further consideration and invited the Committee to endorse this decision. MSC 80 (MSC 80/24, paragraph 11.21) subsequently endorsed the decision of STW 36.

13.4 The Sub-Committee further noted that, in addition, FSI 13 (FSI 13/WP.2) had tasked all Sub-Committees to co-ordinate with their respective Sub-Committee Chairmen to identify lessons learned about the various casualties as given in annex 5 of FSI 13/WP.2, so that the summary of casualty analyses could be put on the IMO web-site. The Secretariat had, in co-operation with the Chairman, provided the necessary input with respect to a collision incident concerning compliance with the COLREGs.

13.5 The Sub-Committee considered the document (STW 36/16/7, annex, page 2) by the Secretariat containing the causes and an analysis of the collision based on the reports of the flag States, namely Bahamas and Panama.

13.6 The delegation of Panama stated that the investigation had clearly identified that the collision was due to human error and that there was no need to review any training requirements.

13.7 The delegation of the Bahamas, raising a number of related concerns, stated, *inter alia*, that the most important issue was that the ships had collided in the vicinity of the F3 Station Buoy in the northeast approaches to the Dover Strait; noted that the issue of safety of traffic around the F3 Station Buoy had been discussed by the Sub-Committee during the current session (paragraph 3.11 refers); and questioned why this factor had been omitted from the report of FSI 12 (annex to document STW 36/16/7).

13.8 The delegation of the Bahamas further questioned the accuracy of the report of FSI 12 in that the Bahamas had made no recommendation with regard to the need for radar training and concurred with Panama that there was no need to review the training requirements.

13.9 The Sub-Committee, noting that the delegation of the United Kingdom was reviewing the traffic management in the F3 Station Buoy area, concluded that there was no reason for any specific recommendations or guidance on additional training requirements related to this incident, to be referred to the STW Sub-Committee.

13.10 The Secretariat was instructed to convey the outcome of this discussion to STW 37.

#### **14 CONSIDERATION OF IACS UNIFIED INTERPRETATION**

14.1 The Sub-Committee recalled that in order to expedite the consideration of IACS unified interpretations being submitted to the Committee on a continuous basis, MSC 78 had decided that IACS should submit them directly and, as appropriate, to the sub-committees concerned. To this effect, MSC 78 had agreed to retain, on a continuous basis, the item on "Consideration of IACS unified interpretations" in the work programmes of the BLG, DE, FP, FSI, NAV and SLF Sub-Committees and to include it in the agenda for their next respective sessions. MSC 78 had also decided to refer document MSC 78/22/1 (IACS) to the DE, FP, FSI, NAV and SLF Sub-Committees, instructing them to review the interpretations annexed to the document, which fall within their purview and prepare appropriate interpretations for approval.

14.2 The Sub-Committee also recalled that, at its fiftieth session, it had considered on a preliminary basis the proposal by IACS (MSC 78/22/1, annex 7) regarding IACS unified interpretation SC139 relating to Navigation bridge visibility. The observer from IACS had informed the Sub-Committee that some other IACS Unified Interpretations might also be submitted to NAV 51. Members were invited to submit comments and detailed proposals on the matter for consideration at NAV 51.

14.3 The Sub-Committee noted that no document had been submitted to the Sub-Committee for consideration by IACS.

14.4 The observer from IACS informed the Sub-Committee that IACS would submit relevant IACS Unified Interpretation proposals for its review to NAV 52.

## **15 REVISION OF PERFORMANCE STANDARDS FOR VDRs AND S-VDRs**

15.1 The Sub-Committee recalled that MSC 79, having considered a proposal by the United Kingdom (MSC 79/20/7) to revise the performance standards for the Shipborne Voyage Data Recorders (VDRs) (resolution A.861(20)) and Shipborne Simplified Voyage Data Recorders (S-VDRs) (resolution MSC.163(78)) to take account of both downloading and playback of the data and to define standard method for downloading and read-out of data to better enable the data to be used for accident investigation and ship management, had agreed to include, in the Sub-Committee's work programme and the provisional agenda for NAV 51, a high priority item on "Revision of the performance standards for VDRs and S-VDRs", with a target completion date of 2006.

15.2 The Sub-Committee considered briefly documents by Denmark (NAV 51/15) and the United Kingdom (NAV 51/15/1).

15.3 The Sub-Committee noted that the performance standards for S-VDRs mirror that of VDRs but did not address the problems of downloading and playback.

15.4 The delegation of the Bahamas brought to the attention of the Sub-Committee four instances where VDR data had not apparently been available after incidents and suggested that the standards for VDRs might usefully be re-visited. In two cases ships had been hit by waves which had flooded the bridge and destroyed the VDR. In another case the ship had hit a road bridge which had destroyed the ship's bridge together with its VDR. In the fourth case the master had forgotten to save the recording and the records were over written after the incident.

15.5 The delegation of the Bahamas and the Republic of Korea, whilst supporting the revision of performance standards for VDRs and S-VDRs, emphasized the need for additional measures for existing VDRs for downloading and playback of data for inclusion in the existing performance standards. The Sub-Committee instructed the Technical Working Group to take this into account during consideration of possible amendments to the performance standards.

15.6 The Sub-Committee agreed to refer documents NAV 51/15 and NAV 51/15/1 to the Technical Working Group.

### **Report of the Technical Working Group**

15.7 Having received and considered the Technical Working Group's report (NAV 51/WP.3), the Sub-Committee (with reference to paragraphs 4.1 to 4.7 and annex 2) took action as summarized hereunder.

15.8 The Sub-Committee approved SN/Circ.246 on Recommended means for extracting stored data from voyage data recorders (VDRs) and simplified voyage data recorders (S-VDRs) for investigation Authorities, as a matter of urgency, taking into account that the next deadline of fitting VDRs commences in July 2006 and therefore it was a short time for manufacturers to comply with, and invited the Committee to endorse the action taken.

15.9 Taking into account the Group's opinion that no other amendments were needed except concerning download and playback equipment, the Sub-Committee approved the draft MSC resolution on Adoption of amendments to the performance standards for shipborne voyage data recorders (VDRs) (resolution A.861(20)) and simplified voyage data recorders (S-VDRs)

(resolution MSC.163(78)), set out in annex 15, for submission to the Committee with a view to adoption.

15.10 The Committee was invited to delete the item “Revision of performance standards for VDRs and S-VDRs” from the Sub-Committee's work programme, as the work had been completed.

## **16 WORK PROGRAMME AND AGENDA FOR NAV 52**

16.1 The Sub-Committee recalled that, at MSC 78, the Chairman, in addressing the Committee's method of work relating to the consideration of proposals for new work programme items, had clarified that the objective of the Committee when discussing these proposals was to decide, based upon justification provided by Member Governments in accordance with the Guidelines on the organization and method of work, whether the new item should or should not be included in the sub-committee's work programme. A decision to include a new item in a sub-committee's work programme did not mean that the Committee agreed with the technical aspects of the proposal. If it was decided to include the item in a sub-committee's work programme, detailed consideration of the technical aspects of the proposal and the development of appropriate requirements and recommendations should be left to the sub-committee concerned. This clarification was reinforced at MSC 80.

16.2 The Sub-Committee noted that MSC 80 had agreed to include, in the NAV Sub-Committee's work programme, high priority items on:

- .1 “Amendments to the ECDIS performance standards”, with two sessions needed to complete the item and instructed the Sub-Committee to include the item in the provisional agenda for NAV 52;
- .2 “Development of guidelines for the installation of shipborne radar equipment”, with two sessions needed to complete the item and instructed the Sub-Committee to include the item in the provisional agenda for NAV 52;
- .3 “Amendments to COLREGs Annex I related to colour specifications of lights”, with two sessions needed to complete the item and instructed the Sub-Committee to consider including the item in the provisional agenda for NAV 52; and
- .4 “Development of performance standards for navigation lights, navigation light controllers and associated equipment”, with two sessions needed to complete the item and instructed the Sub-Committee to consider including the item in the provisional agenda for NAV 52.

16.3 Taking into account the progress made at the current session, the decisions of MSC 80 and the provisions of the agenda management procedure, the Sub-Committee prepared a revised work programme and a provisional agenda for NAV 52 (NAV 51/WP.1, as amended) based on those approved by MSC 80 (NAV 51/2/2, annexes 1 and 2), as set out in annexes 16 and 17 respectively, for consideration and approval by the Committee. While reviewing the work programme, the Sub-Committee agreed to invite the Committee to:

- .1 delete the following work programme items, as work on them has been completed:
  - .1.1 item H.2 Passenger ship safety: effective voyage planning for passenger ships; 2005

.1.2	item H.3	Review of the OSV Guidelines (co-ordinated by SLF);	2005
.1.3	item H.4	Review of the 2000 HSC Code and amendments to the DSC Code and the 1994 HSC Code;	2005
.1.4	item H.5	Measures to enhance maritime security;	2005
.1.5	item H.7	Review of the SPS Code (co-ordinated by DE);	2006
.1.6	item H.10	Revision of the performance standards for VDRs and S-VDRs; and	2006
.2	extend the target completion date of the following work programme sub-items:		
1.1	item H.1.1	new developments in the field of GNSS, especially Galileo;	2008
.1.2	item H.1.2	review and amendment of IMO policy for GNSS (resolution A.915(22));	2008
.1.3	item H.1.3	recognition of radionavigation systems as components of the WWRNS (resolution A.953(23)); and	2008
.3	add a new sub-item to item H.1 of the work programme and re-number accordingly:		
.1.1	item H.1.1	performance standards for shipborne Galileo receiver equipment.	2006

### **Updated Terms of Reference of the Sub-Committee**

16.4 The Sub-Committee noted its terms of reference (MSC 80/20, annex), as approved by MSC 80.

### **Arrangements for the next session**

16.5 The Sub-Committee anticipated that Working Groups on the following subjects might be established at NAV 52:

- .1 Ships' Routing;
- .2 Technical matters; and
- .3 ECDIS issues.

### **Date of the next session**

16.6 The Sub-Committee noted that the fifty-second session of the Sub-Committee had been tentatively scheduled to be held from 17 to 21 July 2006.

## **17 ELECTION OF THE CHAIRMAN AND VICE-CHAIRMAN FOR 2006**

17.1 The Sub-Committee unanimously re-elected Mr. K. Polderman (the Netherlands) as Chairman and elected Mr. M. Sollosi (United States) as Vice-Chairman for 2006.

17.2 The Sub-Committee, having been informed of its current Vice-Chairman's decision to relinquish office at the end of the current year, expressed its deep appreciation to Dr. V.I. Peresykin (Russian Federation) for his outstanding contribution over many years to the attainment of IMO's objectives in general, the work of the relevant bodies of the Organization, and, in particular, the Sub-Committee and wished him happiness in life and success in his future career.

## **18 ANY OTHER BUSINESS**

18.1 The Sub-Committee noted with interest the information provided by Denmark (NAV 51/18) on an incident, on 3 March 2005, involving a cargo ship of 3120 gross tonnage which, although equipped with a bridge navigational watch alarm system, had failed to follow its planned track and collided with the combined road and rail bridge across the Great Belt in Denmark. It further noted that Denmark had also informed MSC 80 on the incident and intended to submit a proposal to MSC 81 suggesting that ships should be equipped with, and have in operation, a Bridge Navigational Watch Alarm System (BNWAS) and that carriage requirements for such a system are put on the work programme and agenda of the Sub-Committee.

18.2 There was discussion on the need for a carriage requirement for a BNWAS. Some delegations pointed out that the standards on training and watchkeeping should be followed by an adequate bridge watch-keeping team, and hence were of the view that there was no need for a BNWAS carriage requirement and in any case it should not be applicable to all ships. Others supported the views of Denmark as, in their opinion, BNWAS would enhance the safety of life at sea.

### **AIS interference in the vicinity of St. Thomas (United States Virgin Islands)**

18.3 The Sub-Committee noted with interest the information provided by the United States (NAV 51/INF.5) on radio interference to AIS in the vicinity of St. Thomas, Virgin Islands (United States Virgin Islands) and that since 17 December 2004 the United States had been broadcasting this warning by a NAVAREA IV Notice to mariners.

18.4 The Sub-Committee also noted that the United States intended to cancel the Notice to mariners once that interference had ceased and that the United States Federal Communications Commission (FCC) had initiated the reallocation of these channels to AIS, but had not completed that action.

### **Promulgation of localized Maritime Safety Information**

18.5 The Sub-Committee noted with interest the information provided by IALA (NAV 51/INF.6) on Promulgation of localized Maritime Safety Information.

18.6 The Sub-Committee also noted IALA's view that the Short Safety Related Message should constitute an additional means to transmit localized maritime safety information. Its main advantage was that it could be used to ensure quick availability of information to the Officer of the Watch (OOW), until the information was promulgated by the World Wide Navigation Warning System (WWNWS) and/or other conventional means.

### **Hydrography for the safety of navigation in the Baltic Sea**

18.7 The Sub-Committee noted with interest the information provided by IHO (NAV 51/INF.7) on hydrography for the safety of navigation in the Baltic Sea: The HELCOM harmonized re-survey Plan.

18.8 The Sub-Committee further noted that the main goal of the re-survey plan on major shipping routes and ports was to ensure that the safety of navigation in the Baltic Sea would not be endangered by inadequate hydrographic source information. The re-surveys were considered important, as new shallows or depths less than previously assumed had been found.

### **Transitory non-compliance when conducting ballast water exchange: proposed amendments to SOLAS regulation V/22**

18.9 The Sub-Committee recalled that MSC 78, on the basis of the proposal of MEPC 49 (document MSC 78/2/1, paragraph 3) to confirm the acceptability of transitory non-compliance with safety regulations when conducting ballast water exchange, had agreed, in this context, to instruct the NAV and SLF Sub-Committees to specify the permissible limits of transitory deviation for safety problem areas and to report to the Committee, to enable it to consider the aforementioned proposal of MEPC 49 and take action as appropriate.

18.10 The Sub-Committee also recalled that, at its fiftieth session, it had been of the opinion that with the information presently available, it was only possible to consider the matter on a preliminary basis. The delegation of the United Kingdom had informed NAV 50 that it had submitted to MEPC 52 Guidelines that included precautionary advice to masters when undertaking ballast water exchange sequences involving periods when the criteria for propeller immersion, minimum draft and/or trim and bridge visibility could not be met and that they would be considering proposals to amend SOLAS regulation V/22 in the context of ballast water exchange. The delegation of Brazil also advised that paragraphs 2.10 to 2.15 of the annex to MEPC/Circ.389 and MSC/Circ.1021 were relevant to ballast water exchange. After an exchange of views, NAV 50 concluded that with the information presently available it was not possible to make further progress.

18.11 The Sub-Committee noted that MSC 79 had considered the proposal by the United Kingdom (MSC 79/10/2) on possible transitory non-compliance, especially with bridge visibility requirements in SOLAS regulation V/22, when ships conduct ballast water exchange at sea, which addressed the issue of transitory non-compliance with requirements for propeller immersion, minimum draught and/or trim and bridge visibility. MSC 79 had noted that the same issue had also been discussed at MEPC 52 based on a near identical document submitted by the United Kingdom (MEPC 52/2/12) to MEPC 52.

18.12 The Sub-Committee was also informed that MSC 79 had also noted MEPC 52's (MEPC 52/24, paragraphs 2.8 and 2.9) agreement to refer documents MEPC 52/WP.3 (containing legal advice on transitory non-compliance with SOLAS regulation V/22 during ballast water exchange as provided by the Legal Office of the Organization) and MEPC 52/2/12

(United Kingdom), proposing amendments to SOLAS regulation V/22 in connection with transitory non-compliance with SOLAS when conducting ballast water exchange, to it for consideration. MSC 79, having noted that identical advice had been provided by the Legal Office of the Organization regarding document MSC 79/10/2, considered document MEPC 52/WP.3 and reviewed the proposed amendments to SOLAS regulation V/22, as proposed by the United Kingdom, and the proposed text suggested by the Legal Office of the Organization. MSC 79, based on the concurrence of the United Kingdom, had agreed to replace the draft text in annex 2 to document MSC 79/10/2 with the text given in paragraph 4 of document MEPC 52/WP.3. There had been some debate on the issue with some delegations urging caution in revising SOLAS regulation V/22, as ballast water exchange was an operational issue and the safety of the ship was important; whilst other delegations were of the opinion that the point of view of the master also needed to be considered, including national/regional regulations or requirements regarding ballast water exchange.

18.13 The Sub-Committee noted also that MSC 79, recognizing that there was equal support for both views, had approved the proposed amendments to SOLAS regulation V/22 with a view to adoption at MSC 81. To this effect, the Committee had invited the Secretary-General to circulate the aforementioned amendments in accordance with SOLAS article VIII. In order to facilitate the consideration of the draft amendments at MSC 81, the Committee had instructed NAV 51 to look at the proposed amendments in detail and submit any comments to MSC 81.

18.14 The Sub-Committee, having considered the proposed amendments to SOLAS regulation V/22 (MSC 79/23/Add.2, annex 36), had no comments on the text and contents of the proposed amendments.

### **Regional Marine Electronic Highway in the East Asian Seas**

18.15 The Sub-Committee recalled that at NAV 47, NAV 48 and NAV 50, the Secretariat had updated the Sub-Committee on the key elements and expected outputs of the project for the Development of a Regional Marine Electronic Highway (MEH) in the East Asian Seas including the progress made.

18.16 The Sub-Committee further recalled that the major output of the PDF Block B grant was the 4-year GEF/World Bank/IMO Demonstration Phase in Partnership with IHO, INTERTANKO and ICS (MEH Demonstration Project) proposal, which was endorsed by the GEF Council on 25 July 2003.

18.17 The Sub-Committee noted that the project proposal, which involved navigational and hydrography issues, would be considered by the Board of Directors of the World Bank with a view to its approval by September 2005 for commencement of implementation towards the latter part of 2005. A draft Memorandum of Understanding to implement the MEH Demonstration Project was currently under review and was expected to be signed prior to September 2005 by Indonesia, Malaysia, and Singapore. In addition, a Memorandum of Arrangements (MOA) to implement specific activities of the project in the partnerships with IHO, INTERTANKO and ICS was under review and was expected to be signed prior to the September 2005 World Bank Board meeting.

## **EXPRESSIONS OF APPRECIATION**

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

- Mr. Kim Fisher (United Kingdom) (on retirement); and
- Dr. V.I. Peresypkin (Russian Federation) (on relinquishing of office as Vice-Chairman of the Sub-Committee at the end of 2005).

## **EXPRESSIONS OF CONDOLENCES**

18.19 The Sub-Committee, having been informed of the recent passing of Captain Zenon Sdougos (Greece) and having appreciated his major contribution to the work of IMO and the promotion of maritime safety, in general, and the Sub-Committee in particular, both as an earlier delegate and member of the Secretariat, requested the delegation of Greece to convey the Sub-Committee's and the Secretariat's condolences and sympathy to the family, friends and colleagues of Capt. Sdougos who would be sadly missed.

## **19 ACTION REQUESTED OF THE COMMITTEE**

19.1 The Committee, at its eight-first session, is invited to:

- .1 in accordance with resolution A.858(20), adopt:
  - .1 the proposed new traffic separation schemes, including associated routeing measures for seven Colombian ports, namely Puerto Bolivar, Santa Marta, Barranquilla, Cartagena, Turbo, Buenaventura including Bahia Malaga and Tumaco (paragraph 3.33 and annex 1\*);
  - .2 the proposed two new traffic separation schemes for the Canary Islands (associated protective measures for the Canary Islands PSSA) (paragraph 3.44 and annex 1);
  - .3 the proposed amendments to the existing traffic separation schemes "In the Strait of Juan de Fuca and its approaches" (paragraph 3.34 and annex 1);
  - .4 the proposed amendments to the existing traffic separation scheme "Off Cabo de Gata" (paragraph 3.35 and annex 1);
  - .5 the proposed amendments to the existing traffic separation scheme "Off Porkkala Lighthouse" (paragraph 3.36 and annex 1);
  - .6 the proposed amendments to the existing traffic separation scheme "In the Strait of Dover and Adjacent Waters" (paragraph 3.37 and annex 1);

---

\* All references are to paragraphs of, and annexes to, the report of NAV 51 (NAV 51/19).

- .7 the proposed amended associated Area to be Avoided around the CS4 buoy in the Dover Strait (paragraph 3.38 and annex 2);
- .8 the proposed new Areas to be Avoided around the Rosario Islands and Salmedina Bank and the Gulf of Morrosquillo (paragraph 3.41 and annex 2); and
- .9 the proposed new Areas to be Avoided by ships transiting the Canary Islands (associated protective measures for the Canary Islands PSSA) (paragraph 3.45 and annex 2);
- .2 note that the Sub-Committee approved the draft Assembly resolution on the proposed amendments to the existing mandatory ship reporting system “In the Great Belt Traffic Area” for submission to the twenty-fourth session of the Assembly for adoption, as authorized by MSC 80 (paragraph 3.43 and annex 3);
- .3 adopt, in accordance with resolution A.858(20), the new mandatory ship reporting system for the Canary Islands (associated protective measures for the Canary Islands PSSA) (paragraph 3.46 and annex 4);
- .4 note that the Sub-Committee approved the draft Assembly resolution on the proposed Area to Avoided as an associated protective measure for the Galapagos Archipelago PSSA for submission to the twenty-fourth session of the Assembly for adoption, as authorized by MSC 80 (paragraph 3.48 and annex 5);
- .5 note that the Sub-Committee approved the draft Assembly resolution on the associated protective measures for the Baltic Sea Area PSSA for submission to the twenty-fourth session of the Assembly for adoption, as authorized by MSC 80 (paragraph 3.51 and annex 6);
- .6 endorse the action taken by the Sub-Committee in submitting the outcome of its deliberations on the issue of review of the 2000 HSC Code and amendments to the DSC Code and 1994 HSC Code to DE 49 (paragraphs 5.4 to 5.7 and annex 8);
- .7 endorse the action taken by the Sub-Committee in amending the footnote to subparagraph 2.1.5 of SOLAS regulation V/19 to reflect the clarifications and definitions to the term “appropriate portfolio of up-to-date paper charts” as ECDIS backup (paragraph 6.24);
- .8 adopt the draft MSC resolution on the proposed amendments to the 2000 HSC Code, Chapter 13 to implement a phased possible carriage requirement for ECDIS for High-Speed Craft (paragraph 6.26 and annex 9);
- .9 invite Member States to consider and consult with relevant hydrographic authorities on which paper charts would meet the “appropriate folio of up-to-date charts” criteria in waters under their jurisdiction and where ENCs do not exist, and communicate this information to the IHO for inclusion in the online chart catalogue (paragraph 6.30);
- .10 endorse the terms of reference for the Correspondence Group on ECDIS as approved by the Sub-Committee (paragraph 6.35 and annex 11);

- .11 endorse the action taken by the Sub-Committee in submitting the outcome of its deliberations on the issue of review of the OSV Guidelines to SLF 48 (paragraphs 7.2 to 7.3);
- .12 endorse the action taken by the Sub-Committee in submitting the outcome of its deliberations on the issue of review of the SPS Code to DE 49 (paragraphs 8.4 to 8.5);
- .13 approve the draft Assembly resolution on draft Guidelines on voyage planning for passenger ships operating in remote areas for submission to the twenty-fifth session of the Assembly for adoption (paragraph 10.16 and annex 12);
- .14 endorse the action taken by the Sub-Committee in submitting the outcome of its deliberations on the issue of draft performance standards for essential systems and equipment on passenger ships for safe return to port after a casualty and for three hour time to remain habitable after a casualty to DE 49 (paragraphs 10.19 to 10.20 and annex 13);
- .15 endorse, taking into account the outcome of the Sub-Committee's deliberations on the World-wide radionavigation system including the revised performance standards, the justification to include a new agenda item on "Performance standards for shipborne Galileo receiver equipment" and its opinion that the performance standards should be finalized at NAV 52 (paragraphs 12.8 and 16.3.3 and annex 14);
- .16 endorse the Sub-Committee's view that the recognition process for Galileo could be achieved in a timely manner once the system became operational including the invitation to operators of the Galileo system to commence the process as soon as they were able to do so (paragraph 12.9);
- .17 endorse the action taken by the Sub-Committee in submitting the outcome of its deliberations on the issue of casualty analysis to STW 37 (paragraphs 13.5 to 13.10);
- .18 endorse the action taken by the Sub-Committee in circulating SN/Circ.246 on Recommended means for extracting stored data from voyage data recorders (VDRs) and simplified voyage data recorders (S-VDRs) for investigation Authorities (paragraph 15.8);
- .19 adopt in accordance with resolution A.886(21), the proposed draft MSC resolution on Adoption of amendments to the revised performance standards for shipborne voyage data recorders (VDRs) (resolution A.861(20)) and simplified voyage data recorders (S-VDRs) (resolution MSC.163(78)) (paragraph 15.9 and annex 15); and
- .20 approve the report in general.

19.2 In reviewing the work programme of the Sub-Committee, the Committee is invited to consider the revised work programme suggested by the Sub-Committee (annex 16) in general and, in particular, to:

- .1 delete “Review of the 2000 HSC Code and amendments to the DSC Code and the 1994 HSC Code” as the task has been completed (paragraph 5.8);
- .2 delete “Review of the OSV Guidelines”, as the task has been completed (paragraph 7.4);
- .3 delete “Review of the SPS Code”, as the task has been completed (paragraph 8.6);
- .4 delete “Passenger ship safety: effective voyage planning for passenger ships”, as the task has been completed (paragraph 10.21);
- .5 delete “Measures to enhance maritime security”, as the task has been completed (paragraph 11.5); and
- .6 delete “Revision of performance standards for VDRs and S-VDRs”, as the task has been completed (paragraph 15.10);
- .7 extend the target completion date of the following work programme item and sub-items, namely:
  - .1 “World-wide radionavigation system (WWRNS)” with a target completion date of 2008 (paragraph 16.2.1.1);
  - .2 “new developments in the field of GNSS, especially Galileo” with a target completion date of 2008 (paragraph 16.2.1.2);
  - .3 “review and amendment of IMO policy for GNSS (resolution A.915(22))” with a target completion date of 2008 (paragraph 16.2.1.3); and
  - .4 “recognition of radionavigation systems as components of the WWRNS (resolution A.953(23)) with a target completion date of 2008 (paragraph 16.2.1.4); and
- .8 add the following new sub-item under item H.1, namely:
  - .1 “performance standards for shipborne Galileo receiver equipment” with a target completion date of 2006 (paragraphs 12.8 and 16.3.3).

19.3 The Committee is also invited to approve the proposed agenda for the Sub-Committee’s fifty-second session (annex 17), which has been developed using the agenda management procedure.

\*\*\*

## ANNEX 1

## NEW AND AMENDED TRAFFIC SEPARATION SCHEMES

## PUERTO BOLÍVAR

Reference chart : Mar Caribe – República de Colombia – Aproximación a Bahía Pórtete, COL 228, (2<sup>nd</sup> Edition, 1999).

**N.B.** Coastline based on Colombian charts.  
WGS 84 Datum.

**Description of the TSS “Entry to Puerto Bolívar”**

The TSS for the approach to Puerto Bolívar has three parts:

*Part I***Separation zone**

A half-mile wide separation zone is centred upon a line joining the following geographical positions:

- |     |              |               |
|-----|--------------|---------------|
| (1) | 12° 19'.20 N | 071° 59'.70 W |
| (2) | 12° 21'.81 N | 072° 01'.19 W |

*Part II***Eastern approach**

(a) A separation zone bounded by a line joining the following geographical positions:

- |     |              |               |
|-----|--------------|---------------|
| (3) | 12° 18'.29 N | 072° 01'.00 W |
| (4) | 12° 20'.18 N | 072° 03'.80 W |
| (5) | 12° 18'.67 N | 072° 00'.64 W |
| (6) | 12° 20'.75 N | 072° 03'.13 W |

(b) A south-eastbound traffic lane between the separation zone and a line joining the following geographical positions:

- |     |              |               |
|-----|--------------|---------------|
| (7) | 12° 17'.60 N | 072° 01'.58 W |
| (8) | 12° 19'.05 N | 072° 05'.00 W |

(c) A north-westbound traffic lane between the separation line and the separation zone in Part I.

*Part III*

**Western approach**

- (a) A half-mile wide separation zone is centred upon a line joining the following geographical positions:

- |      |              |               |
|------|--------------|---------------|
| (9)  | 12° 19'.82 N | 071° 58'.50 W |
| (10) | 12° 22'.91 N | 071° 59'.08 W |

- (b) A northbound traffic lane between the above-mentioned separation zone and a line joining the following geographical positions:

- |      |              |               |
|------|--------------|---------------|
| (11) | 12° 20'.12 N | 071° 57'.45 W |
| (12) | 12° 23'.37 N | 071° 57'.60 W |

- (c) A south-eastbound traffic lane between the above-mentioned separation zone and the separation zone in Part I.

**SANTA MARTA**

Reference Chart: Mar Caribe – República de Colombia - Bahía de Taganga a Punta Barro Blanco, COL 244, (1<sup>st</sup> Edition, 1998).

**N.B.** Coastline based on chart COL 249 and 1977 grids of the Agustín Codazzi Geographical Institute, updated by the 1992 topographical maps of the Colombian Navy Centre for Oceanographic and Hydrographical Research (CIOH).  
WGS 84 Datum.

**Description of the TSS “Entry to Santa Marta”**

The TSS for the approach to Santa Marta has three parts:

*Part I*

- (a) **Separation zone:** A separation zone dividing two traffic approach schemes, bounded by a line joining the following geographical positions:

- |     |              |               |
|-----|--------------|---------------|
| (1) | 11° 14'.35 N | 074° 15'.36 W |
| (2) | 11° 14'.85 N | 074° 15'.36 W |
| (3) | 11° 14'.85 N | 074° 18'.00 W |
| (4) | 11° 14'.35 N | 074° 18'.00 W |

*Part II*

**North-western approach**

- (a) A separation zone bounded by a line joining the following geographical positions:

- |     |              |               |
|-----|--------------|---------------|
| (5) | 11° 15'.35 N | 074° 15'.23 W |
| (6) | 11° 15'.45 N | 074° 15'.18 W |
| (7) | 11° 16'.89 N | 074° 17'.24 W |
| (8) | 11° 16'.05 N | 074° 17'.52 W |

- (b) A north-westbound traffic lane between the separation zone and a line joining the following geographical positions:

(9) 11° 15'.85 N            074° 14'.90 W  
(10) 11° 18'.25 N            074° 16'.29 W

- (c) An eastbound traffic lane between the separation zone in (a) and the separation zone in Part I.

*Part III*

**South-western approach**

- (a) A separation zone bounded by a line joining the following geographical positions:

(11) 11° 13'.75 N            074° 15'.18 W  
(12) 11° 13'.88 N            074° 15'.23 W  
(13) 11° 12'.39 N            074° 17'.52 W  
(14) 11° 12'.00 N            074° 17'.24 W

- (b) A north-eastbound traffic lane between the separation zone and a line joining the following geographical positions:

(15) 11° 13'.37 N            074° 14'.90 W  
(16) 11° 10'.97 N            074° 16'.29 W

- (c) A westbound traffic lane between the separation zone in (a) and the separation zone in Part I.

*Part IV*

**Precautionary area**

- (a) A circular precautionary area of 1.82 miles radius, with its centre at the following geographical position:

(17) 11° 14'.60 N            074° 13'.54 W

*Part V*

**Area to be Avoided**

- (a) **Morro island:** A circular area of 0.2 miles radius, with its centre at the following geographical position:

(18) 11° 14'.98 N            074° 13'.82 W

**Note:** In order to prevent the risks of pollution and environmental damage in highly sensitive sea areas, all tankers and ships over 500 gross tonnage carrying oil or dangerous bulk cargo as cargo should avoid this area.

## **BARRANQUILLA**

Reference chart: Mar Caribe – República de Colombia – Santa Marta a Puerto Colombia, COL 407 (2<sup>nd</sup> Edition, July 1998).

**N.B.** Coastline based on topographical maps of the United States Defense Mapping Agency (DMA).

WGS 84 Datum.

### **Description of the TSS “Barranquilla”**

The TSS has three parts:

#### *Part I*

##### **Eastern approach:**

(a) A separation zone bounded by the following geographical positions:

- |     |              |               |
|-----|--------------|---------------|
| (1) | 11° 08'.68 N | 074° 49'.24 W |
| (2) | 11° 09'.25 N | 074° 45'.21 W |
| (3) | 11° 10'.74 N | 074° 45'.61 W |
| (4) | 11° 09'.15 N | 074° 49'.39 W |

(b) An eastbound traffic lane between the separation zone and a line joining the following geographical positions:

- |     |              |               |
|-----|--------------|---------------|
| (5) | 11° 08'.15 N | 074° 49'.23 W |
| (6) | 11° 07'.70 N | 074° 45'.19 W |

(c) A south-westbound traffic lane between the separation zone and a line joining the following geographical positions:

- |     |              |               |
|-----|--------------|---------------|
| (7) | 11° 12'.09 N | 074° 46'.45 W |
| (8) | 11° 09'.60 N | 074° 49'.62 W |

#### *Part II*

##### **Western approach**

(a) A separation zone bounded by a line joining the following geographical positions:

- |      |              |               |
|------|--------------|---------------|
| (9)  | 11° 08'.80 N | 074° 53'.26 W |
| (10) | 11° 09'.61 N | 074° 57'.20 W |
| (11) | 11° 11'.20 N | 074° 56'.61 W |
| (12) | 11° 09'.20 N | 074° 53'.06 W |

(b) An eastbound traffic lane between the separation zone and a line joining the following geographical positions:

- |      |              |               |
|------|--------------|---------------|
| (13) | 11° 08'.21 N | 074° 53'.25 W |
| (14) | 11° 08'.25 N | 074° 57'.30 W |

- (c) A north-westbound traffic lane between the separation zone and a line joining the following geographical positions:

(15) 11° 12'.30 N            074° 55'.81 W  
(16) 11° 09'.64 N            074° 52'.80 W

*Part III*

**Northern approach**

- (a) A separation zone bounded by a line joining the following geographical positions:

(17) 11° 10'.31 N            074° 50'.91 W  
(18) 11° 14'.30 N            074° 50'.30 W  
(19) 11° 14'.40 N            074° 51'.81 W  
(20) 11° 10'.36 N            074° 51'.45 W

- (b) A northbound traffic lane between the separation zone and a line joining the following geographical positions:

(21) 11° 10'.20 N            074° 50'.45 W  
(22) 11° 13'.95 N            074° 48'.90 W

- (c) A southbound traffic lane between the separation zone and a line joining the following geographical positions:

(23) 11° 14'.05 N            074° 53'.35 W  
(24) 11° 10'.26 N            074° 51'.95 W

**Precautionary area**

A precautionary area of 2-mile radius with its centre at the following geographical position:

(25) 11° 08'.35 N            074° 51'.24 W

**CARTAGENA**

Reference chart : Mar Caribe – República de Colombia – Bahía de Cartagena, COL 261 (6<sup>th</sup> Edition, 2003).

**N.B.** Coastline based on aerial photography taken in 1974 and 1980 by the Agustín Codazzi Geographical Institute.  
WGS 84 Datum.

**Description of the TSS “Entry to Cartagena”**

- (a) A separation zone, 0.4 miles wide, centred upon a line joining the following geographical positions:

(1) 10° 19'.20 N            075° 37'.24 W  
(2) 10° 19'.20 N            075° 40'.00 W

- (b) A westbound traffic lane between the separation zone and a line joining the following geographical positions:

(3) 10° 19'.90 N            075° 37'.40 W  
(4) 10° 21'.17 N            075° 40'.00 W

- (c) An eastbound traffic lane between the separation zone and a line joining the following geographical positions:

(5) 10° 18'.50 N            075° 37'.24 W  
(6) 10° 17'.25 N            075° 40'.00 W

## **TURBO**

Reference chart: Mar Caribe – República de Colombia – Bahía Colombia, COL 295 (3<sup>rd</sup> Edition, 2003).

**N.B.** Coastline based on 1964 and 1972 topographical maps of the Agustín Codazzi Geographical Institute, and those of the United States DMA, originally done in 1987 and updated in 1992.  
WGS 84 Datum.

### **Description of the TSS “Turbo”**

- (a) A separation zone, 0.05 miles wide, bounded by a line joining the following geographical positions:

(1) 08° 5'.23 N            076° 47'.24 W  
(2) 08° 9'.45 N            076° 47'.86 W  
(3) 08° 9'.45 N            076° 47'.81 W  
(4) 08° 5'.23 N            076° 47'.19 W

- (b) A half-mile wide northbound traffic lane between the separation zone and a line joining the following geographical positions:

(5) 08° 5'.23 N            076° 46'.69 W  
(6) 08° 9'.45 N            076° 47'.31 W

- (c) A half-mile wide southbound traffic lane between the separation zone and a line joining the following geographical positions:

(7) 08° 9'.45 N            076° 48'.34 W  
(8) 08° 5'.23 N            076° 47'.73 W

## **BUENAVENTURA AND BAHÍA MALAGA**

Reference chart: Océano Pacífico – Sur América – República de Colombia – Aproximación a Bahía de Buenaventura y Bahía Málaga, COL 306 (1<sup>st</sup> Edition, 1998).

**N.B.** Coastline based on aerial photography taken in 1983 by the Agustín Codazzi Geographical Institute.

WGS 84 Datum.

### **Description of the TSS “Entry to Buenaventura”**

(a) A half-mile wide separation zone is centred upon a line joining the following geographical positions:

- |     |              |               |
|-----|--------------|---------------|
| (1) | 03° 47'.89 N | 077° 20'.30 W |
| (2) | 03° 47'.89 N | 077° 23'.00 W |

(b) A westbound traffic lane between the separation zone and a line joining the following geographical positions:

- |     |              |               |
|-----|--------------|---------------|
| (3) | 03° 48'.63 N | 077° 20'.30 W |
| (4) | 03° 50'.20 N | 077° 23'.00 W |

(c) An eastbound traffic lane between the separation zone and a line joining the following geographical positions:

- |     |              |               |
|-----|--------------|---------------|
| (5) | 03° 47'.12 N | 077° 20'.30 W |
| (6) | 03° 45'.58 N | 077° 23'.00 W |

### **Description of the TSS “Entry to Bahía Málaga”**

(a) A half-mile wide separation zone is centred upon a line joining the following geographical positions:

- |     |              |               |
|-----|--------------|---------------|
| (1) | 03° 54'.71 N | 077° 27'.68 W |
| (2) | 03° 54'.71 N | 077° 30'.00 W |

(b) A westbound traffic lane between the separation zone and a line joining the following geographical positions:

- |     |              |               |
|-----|--------------|---------------|
| (3) | 03° 55'.45 N | 077° 27'.68 W |
| (4) | 03° 56'.81 N | 077° 30'.00 W |

(c) An eastbound traffic lane between the separation zone and a line joining the following geographical positions:

- |     |              |               |
|-----|--------------|---------------|
| (5) | 03° 53'.94 N | 077° 27'.68 W |
| (6) | 03° 52'.59 N | 077° 30'.00 W |

## TUMACO

Reference chart: Océano Pacífico – República de Colombia – Aproximación a la Bahía de Tumaco, COL 102 (2<sup>nd</sup> Edition, 2000).

**N.B.** Coastline based on digital data from the “Physiographical Map of San Andrés de Tumaco Urban Area” completed in 1999 by the Pacific Pollution Control Centre.  
WGS 84 Datum.

### Description of the TSS “Entry to Tumaco”

The traffic separation scheme for the approach to Tumaco has two parts:

#### *Part I*

##### **Precautionary area**

A circular precautionary area with a two-mile radius, with its centre at the following geographical position:

01° 53′.54 N                      078° 46′.84 W

#### *Part II*

##### **North-western approach**

(a) A separation zone bounded by a line joining the following geographical positions:

- |     |              |               |
|-----|--------------|---------------|
| (1) | 01° 55′.31 N | 078° 47′.81 W |
| (2) | 01° 57′.95 N | 078° 49′.23 W |
| (3) | 01° 57′.18 N | 078° 50′.29 W |
| (4) | 01° 55′.00 N | 078° 48′.22 W |

(b) A north-westbound traffic lane between the separation zone and a line joining the following geographical positions:

- |     |              |               |
|-----|--------------|---------------|
| (5) | 01° 55′.55 N | 078° 46′.85 W |
| (6) | 01° 58′.58 N | 078° 46′.88 W |

(c) A south-eastbound traffic lane between the separation zone and a line joining the following geographical positions:

- |     |              |               |
|-----|--------------|---------------|
| (7) | 01° 55′.09 N | 078° 51′.59 W |
| (8) | 01° 54′.17 N | 078° 48′.75 W |

## THE CANARY ISLANDS

Reference chart: No.209 in the Catalogue of Nautical Charts of the Spanish Navy Hydrographical Institute, WGS 84 Datum, second edition (12th impression of September 2003), which covers the Canary Islands and the west coast of Africa from Cape Yubi to Cape Bojador.

### 1 Description of the new traffic separation schemes

#### 2 Eastern Traffic Separation Scheme (between Grand Canary and Fuerteventura):

- Two traffic lanes, each three miles wide;
- An intermediate traffic separation zone two miles wide;
- A rectangular precautionary area;
- Two inshore traffic zones.

#### 2.1 Description of the Traffic Separation Scheme

(a) A separation line connecting the following geographical positions:

(3)	28° 20'.470 N	014° 56'.910 W
(4)	28° 12'.295 N	015° 00'.289 W
(5)	28° 02'.898 N	015° 04'.167 W
(6)	27° 51'.622 N	015° 08'.813 W

(b) An intermediate traffic separation zone bounded by the lines connecting the following geographical positions:

(8)	27° 50'.596 N	015° 05'.625 W
(9)	28° 01'.872 N	015° 00'.979 W
(10)	28° 11'.269 N	014° 57'.101 W
(11)	28° 20'.196 N	014° 53'.412 W
(12)	28° 20'.057 N	014° 51'.145 W
(13)	28° 10'.660 N	014° 55'.028 W
(14)	28° 01'.263 N	014° 58'.905 W
(15)	27° 49'.987 N	015° 03'.550 W

(c) A traffic lane for southbound traffic on a 200° true course is established between the separation line/zone described in paragraphs (a) and (b) above.

(d) A line of separation from the inshore traffic zone, connecting the following geographical positions:

(16)	27° 48'.961 N	015° 00'.362 W
(17)	28° 00'.237 N	014° 55'.718 W
(18)	28° 09'.634 N	014° 51'.841 W
(19)	28° 19'.784 N	014° 47'.762 W

(e) A traffic lane for northbound traffic on a 020° true course is established between the separation line/zone described in paragraphs (b) and (d) above.

### Precautionary area

- (f) A precautionary area bounded by a line connecting the geographical positions 4, 5, 17 and 18.

### Inshore traffic zones

- (g) An inshore traffic zone between the east coast of Grand Canary island and a line joining the following geographical positions:

(1)	Faro de la Isleta (28° 10'.400 N)	015° 25'.000 W
(2)	28° 22'.000 N	015° 19'.000 W
(3)	28° 20'.470 N	014° 56'.910 W
(4)	28° 12'.295 N	015° 00'.289 W
(5)	28° 02'.898 N	015° 04'.167 W
(6)	27° 51'.622 N	015° 08'.813 W
(7)	Faro Punta Arinaga (27° 51'.700 N)	015° 23'.000 W

- (h) An inshore traffic zone bounded by a line joining the following geographical positions:

(16)	27° 48'.961 N	015° 00'.362 W
(17)	28° 00'.237 N	014° 55'.718 W
(18)	28° 09'.634 N	014° 51'.841 W
(19)	28° 19'.784 N	014° 47'.762 W
(20)	28° 19'.000 N	014° 36'.000 W
(21)	Faro de Punta Jandia (28° 03'.80 N)	014° 30'.300 W
(22)	27° 45'.000 N	014° 44'.000 W
(16)	27° 48'.961 N	015° 00'.362 W

**Note:** Ships that so wish may give voluntary notification of entry to and departure from the TSS via the Las Palmas Regional MRCC, using VHF channel 16.

### 3 Western Traffic Separation Scheme (between Grand Canary and Tenerife):

- Two traffic lanes, each three miles wide;
- An intermediate traffic separation zone two miles wide;
- A rectangular precautionary area;
- Two inshore traffic zones.

#### 3.1 Description of the Traffic Separation Scheme:

- (a) A separation line, connecting the following geographical positions:

(3)	28° 38'.008 N	015° 46'.655 W
(4)	28° 27'.283 N	015° 56'.899 W
(5)	28° 18'.857 N	016° 04'.936 W
(6)	28° 03'.536 N	016° 19'.521 W

- (b) An intermediate traffic separation zone bounded by the lines connecting the following geographical positions:

(8)	28° 01'.608 N	016° 16'.917 W
(9)	28° 16'.929 N	016° 02'.336 W
(10)	28° 25'.355 N	015° 54'.302 W
(11)	28° 36'.327 N	015° 43'.837 W
(12)	28° 35'.443 N	015° 42'.327 W
(13)	28° 24'.257 N	015° 52'.967 W
(14)	28° 15'.831 N	016° 01'.000 W
(15)	28° 00'.510 N	016° 15'.578 W

- (c) A traffic lane for southbound traffic on a 220° true course is established between the separation line/zones described in paragraphs (a) and (b) above.

- (d) A line of separation from the inshore traffic zone, connecting the following geographical positions:

(16)	27° 58'.582 N	016° 12'.975 W
(17)	28° 13'.903 N	015° 58'.401 W
(18)	28° 22'.329 N	015° 50'.370 W
(19)	28° 33'.811 N	015° 39'.432 W

- (e) A traffic lane for northbound traffic on a 040° true course is established between the separation line/zone described in paragraphs (b) and (d) above.

### **Precautionary area**

- (f) A precautionary area bounded by the line connecting the geographical positions 4, 5, 17 and 18.

### **Inshore traffic zones**

- (g) An inshore traffic zone between the east coast of Santa Cruz de Tenerife island and a line connecting the following geographical positions:

(1)	Faro Punta Anaga (28° 34'.80 N)	016° 08'.300 W
(2)	28° 48'.000 N	016° 04'.000 W
(3)	28° 38'.008 N	015° 46'.655 W
(4)	28° 27'.283 N	015° 56'.899 W
(5)	28° 18'.857 N	016° 04'.936 W
(6)	28° 03'.536 N	016° 19'.521 W
(7)	Punta Roja (28° 01'.476 N)	016° 32'.884 W

- (h) An inshore traffic zone between the west coast of Gran Canaria island and a line connecting the following geographical positions:

(16)	27° 58'.582 N	016° 12'.975 W
(17)	28° 13'.903 N	015° 58'.401 W
(18)	28° 22'.329 N	015° 50'.370 W

(19)	28° 33'.811 N	015° 39'.432 W
(20)	28° 22'.000 N	015° 19'.000 W
(21)	Faro de la Isleta (28°10'.40 N)	015° 25'.000 W
(22)	28° 00'.000 N	015° 49'.180 W
(23)	28° 00'.000 N	016° 00'.000 W
(24)	27° 44'.000 N	016° 00'.000 W

**Note:** Ships that so wish may give voluntary notification of entry to and departure from the TSS via Tenerife MRCC, using VHF channel 16.

## AMENDMENTS TO THE EXISTING TRAFFIC SEPARATION SCHEME IN THE “STRAIT OF JUAN DE FUCA AND ITS APPROACHES”

(Reference charts: Canadian Hydrographic Service 3602, 2002 edition, 3481, 2000 edition, and 3526, 2001 edition, United States 18400, 2000 edition; 18421, 2000 edition; 18440, 2000 edition; 18460, 1998 edition; 18465, 1995 edition; 18480, 1999 edition; 18485, 1998 edition; Canadian Hydrographic Service 3440, 1998 edition. **Note:** The charts are based on WGS 84 Datum.)

### Description of the routing system

The present description of the routing system in the “In the Strait of Juan de Fuca and its Approaches” includes two parts. Part I consists of a Western approach (TSS), a Southwestern approach (TSS), and a precautionary area in the approaches to the Strait of Juan de Fuca. Part II consists of Western lanes (TSS), Southern lanes (TSS), Northern lanes (TSS), and a precautionary area in the Strait of Juan de Fuca. This amendment will affect the Western approach and precautionary area of Part I and the Western lanes of Part II.

Part I	Western approaches (TSS)	(amended)
	Southwestern approach (TSS)	(no change)
	Precautionary area	(amended)
Part II	Western lanes (TSS)	(amended)
	Southern lanes (TSS)	(no change)
	Northern lanes (TSS)	(no change)
	Precautionary area	(no change)

### Description of the traffic separation schemes

#### *Part I*

In the approaches to the Strait of Juan de Fuca there are two traffic separation schemes and one precautionary area:

#### **Western approach**

(a) A separation zone is bounded by a line connecting the following geographical positions:

(1)	48° 30'.10 N	125° 09'.00 W
(2)	48° 30'.10 N	125° 04'.67 W
(3)	48° 29'.11 N	125° 04'.67 W
(4)	48° 29'.11 N	125° 09'.00 W

(b) A traffic lane for westbound traffic is established between the separation zone and a line connecting the following geographical positions:

- |     |              |               |
|-----|--------------|---------------|
| (5) | 48° 32'.09 N | 125° 04'.67 W |
| (6) | 48° 32'.09 N | 125° 08'.98 W |

(c) A traffic lane for eastbound traffic is established between the separation zone and a line connecting the following geographical positions:

- |     |              |               |
|-----|--------------|---------------|
| (7) | 48° 27'.31 N | 125° 09'.00 W |
| (8) | 48° 28'.13 N | 125° 04'.67 W |

### South-western approach

(a) A separation zone is bounded by a line connecting the following geographical positions:

- |      |              |               |
|------|--------------|---------------|
| (10) | 48° 23'.99 N | 125° 06'.54 W |
| (11) | 48° 27'.63 N | 125° 03'.38 W |
| (12) | 48° 27'.14 N | 125° 02'.08 W |
| (13) | 48° 23'.50 N | 125° 05'.26 W |

(b) A traffic lane for north-eastbound traffic is established between the separation zone and a line connecting the following geographical positions:

- |      |              |               |
|------|--------------|---------------|
| (14) | 48° 22'.55 N | 125° 02'.80 W |
| (15) | 48° 26'.64 N | 125° 00'.81 W |

(c) A traffic lane for south-westbound traffic is established between the separation zone and a line connecting the following geographical positions:

- |     |              |               |
|-----|--------------|---------------|
| (8) | 48° 28'.13 N | 125° 04'.67 W |
| (9) | 48° 24'.94 N | 125° 09'.00 W |

### Precautionary area “JF”

A precautionary area “JF”, is bounded by a line connecting the following geographical positions:

- |      |              |               |
|------|--------------|---------------|
| (5)  | 48° 32'.09 N | 125° 04'.67 W |
| (2)  | 48° 30'.10 N | 125° 04'.67 W |
| (3)  | 48° 29'.11 N | 125° 04'.67 W |
| (8)  | 48° 28'.13 N | 125° 04'.67 W |
| (11) | 48° 27'.63 N | 125° 03'.38 W |
| (12) | 48° 27'.14 N | 125° 02'.08 W |
| (15) | 48° 26'.64 N | 125° 00'.81 W |
| (16) | 48° 28'.13 N | 124° 57'.90 W |
| (18) | 48° 29'.11 N | 125° 00'.00 W |
| (25) | 48° 30'.10 N | 125° 00'.00 W |
| (17) | 48° 32'.09 N | 125° 00'.00 W |

thence back to the point of origin at (5).

*Part II*

Within Part II there are four traffic separation schemes and one Precautionary area in the Strait of Juan de Fuca.

**Western lanes (TSS)**

(a) A separation zone is bounded by a line connecting the following geographical positions:

(18)	48° 29'.11 N	125° 00'.00 W
(19)	48° 29'.11 N	124° 43'.78 W
(20)	48° 13'.89 N	123° 54'.84 W
(21)	48° 13'.89 N	123° 31'.98 W
(22)	48° 14'.49 N	123° 31'.98 W
(23)	48° 17'.02 N	123° 56'.46 W
(24)	48° 30'.10 N	124° 43'.50 W
(25)	48° 30'.10 N	125° 00'.00 W

(b) A traffic lane for north-westbound traffic is established between the separation zone and a line connecting the following geographical positions:

(26)	48° 16'.45 N	123° 30'.42 W
(27)	48° 15'.97 N	123° 33'.54 W
(28)	48° 18'.00 N	123° 56'.07 W
(29)	48° 32'.00 N	124° 46'.57 W
(30)	48° 32'.09 N	124° 49'.90 W
(17)	48° 32'.09 N	125° 00'.00 W

Traffic may exit the lane between points (29) and (30) or may remain in the lane between points (30) and (17) en route to the precautionary area.

(c) A traffic lane for south-eastbound traffic is established between the separation zone and a line connecting the following geographical positions:

(16)	48° 28'.13 N	124° 57'.90 W
(31)	48° 28'.13 N	124° 44'.07 W
(32)	48° 12'.90 N	123° 55'.24 W
(33)	48° 12'.94 N	123° 32'.89 W

**Southern lanes**

(a) A separation zone is bounded by a line connecting the following geographical positions:

(34)	48° 10'.82 N	123° 25'.44 W
(35)	48° 12'.38 N	123° 28'.68 W
(36)	48° 12'.90 N	123° 28'.68 W
(37)	48° 12'.84 N	123° 27'.46 W
(38)	48° 10'.99 N	123° 24'.84 W

- (b) A traffic lane for northbound traffic is established between the separation zone and a line connecting the following geographical positions:

(39) 48° 11'.24 N            123° 23'.82 W  
(40) 48° 12'.72 N            123° 25'.34 W

- (c) A traffic lane for southbound traffic is established between the separation zone and a line connecting the following geographical positions:

(33) 48° 12'.94 N            123° 32'.89 W  
(41) 48° 09'.42 N            123° 24'.24 W

### **Northern lanes**

- (a) A separation zone is bounded by a line connecting the following geographical positions:

(42) 48° 21'.15 N            123° 24'.83 W  
(43) 48° 16'.16 N            123° 28'.50 W  
(44) 48° 15'.77 N            123° 27'.18 W  
(45) 48° 20'.93 N            123° 24'.26 W

- (b) A traffic lane for southbound traffic is established between the separation zone and a line connecting the following geographical positions:

(46) 48° 21'.83 N            123° 25'.56 W  
(26) 48° 16'.45 N            123° 30'.42 W

- (c) A traffic lane for northbound traffic is established between the separation zone and a line connecting the following geographical positions:

(47) 48° 20'.93 N            123° 23'.22 W  
(48) 48° 15'.13 N            123° 25'.62 W

### **Eastern lanes**

- (a) A separation zone is established bounded by a line connecting the following geographical positions:

(49) 48° 13'.22 N            123° 15'.91 W  
(50) 48° 14'.03 N            123° 25'.98 W  
(51) 48° 13'.54 N            123° 25'.86 W  
(52) 48° 12'.89 N            123° 16'.69 W

- (b) A traffic lane for westbound traffic is established between the separation zone and a line connecting the following geographical positions:

(54) 48° 14'.27 N            123° 13'.41 W  
(55) 48° 14'.05 N            123° 16'.08 W  
(48) 48° 15'.13 N            123° 25'.62 W

- (c) A traffic lane for eastbound traffic is established between the separation zone and a line connecting the following geographical positions:

(40)	48° 12'.72 N	123° 25'.34 W
(53)	48° 12'.34 N	123° 18'.01 W

### **Precautionary area**

A precautionary area "PA", is bounded by a line connecting the following geographical positions:

(33)	48° 12'.94 N	123° 32'.89 W
(21)	48° 13'.89 N	123° 31'.98 W
(22)	48° 14'.49 N	123° 31'.98 W
(26)	48° 16'.45 N	123° 30'.42 W
(43)	48° 16'.16 N	123° 28'.50 W
(44)	48° 15'.77 N	123° 27'.18 W
(48)	48° 15'.13 N	123° 25'.62 W
(50)	48° 14'.03 N	123° 25'.98 W
(51)	48° 13'.54 N	123° 25'.86 W
(40)	48° 12'.72 N	123° 25'.34 W
(37)	48° 12'.84 N	123° 27'.46 W
(36)	48° 12'.90 N	123° 28'.68 W

thence back to point of origin at (33).

### **AMENDMENT TO THE EXISTING TRAFFIC SEPARATION SCHEME "OFF CABO DE GATA"**

The reference chart is No.45 B of the Spanish Navy Hydrographical Institute, European datum (Potsdam), March 2001 edition, which covers the area from Cabo Sacratif to Cabo de Gata.

#### **Description of the amended traffic separation scheme:**

- (a) A separation line connecting the following geographical positions:

(1)	36° 26'.89 N	002° 15'.23 W
(2)	36° 26'.89 N	002° 11'.47 W
(3)	36° 28'.13 N	002° 09'.65 W

- (b) An intermediate separation zone bounded by a line connecting the following geographical positions:

(4)	36° 25'.70 N	002° 09'.37 W
(5)	36° 24'.27 N	002° 11'.47 W
(6)	36° 23'.70 N	002° 15'.96 W
(7)	36° 22'.45 N	002° 16'.24 W
(8)	36° 23'.60 N	002° 11'.47 W
(9)	36° 24'.55 N	002° 09'.23 W

- (c) A traffic lane for south-westbound traffic is established between the separation line and separation zone described in paragraphs (a) and (b) above.
- (d) An outer separation zone bounded by a line connecting the following geographical positions:
- |      |              |               |
|------|--------------|---------------|
| (10) | 36° 21'.36 N | 002° 08'.85 W |
| (11) | 36° 20'.36 N | 002° 16'.72 W |
| (12) | 36° 19'.84 N | 002° 16'.84 W |
| (13) | 36° 20'.87 N | 002° 08'.80 W |
- (e) A traffic lane for north-eastward bound traffic is established between the separation zones described in paragraphs (b) and (d) above.

#### **Precautionary area**

- (f) A precautionary area bounded by a line connecting the following geographical positions:
- |      |              |               |
|------|--------------|---------------|
| (1)  | 36° 26'.89 N | 002° 15'.23 W |
| (12) | 36° 19'.84 N | 002° 16'.84 W |
| (14) | 36° 19'.84 N | 002° 20'.00 W |
| (15) | 36° 26'.89 N | 002° 20'.00 W |

#### **Inshore traffic zone**

- (g) An inshore traffic zone contained between the coast of Cabo de Gata and a line connecting the following geographical positions:
- |      |  |               |
|------|--|---------------|
| (16) | Ermita de la Virgen del Mar (36° 49'.60 N) | 002° 17'.80 W |
| (1)  | 36° 26'.89 N                               | 002° 15'.23 W |
| (2)  | 36° 26'.89 N                               | 002° 11'.47 W |
| (3)  | 36° 28'.13 N                               | 002° 09'.65 W |
| (17) | Faro Punta de la Polacra (36° 50'.60 N)    | 002° 00'.10 W |

**Note:** Ships that so wish may give voluntary notification of entry to and departure from the TSS, via the Almería MRCC, using VHF channel 16.

### **AMENDMENTS TO THE EXISTING TSS OFF PORKKALA LIGHTHOUSE**

Reference chart: FIN 952, 2004 edition  
Geodetic datum: WGS 84

#### **Description of the amended traffic separation scheme**

- (a) A separation zone, one mile wide, is centred upon the following geographical positions:
- |     |              |               |
|-----|--------------|---------------|
| (5) | 59° 48'.75 N | 024° 58'.50 E |
| (6) | 59° 49'.30 N | 025° 04'.50 E |
- (b) A traffic lane, one and a half miles wide, is established on each side of the separation zone.

**Description of the extended precautionary area**

(c) A precautionary area is established upon the following geographical positions:

- |     |              |               |
|-----|--------------|---------------|
| (1) | 59° 43'.95 N | 024° 31'.80 E |
| (2) | 59° 50'.70 N | 024° 57'.90 E |
| (3) | 59° 46'.75 N | 024° 59'.50 E |
| (4) | 59° 47'.85 N | 024° 30'.20 E |

**AMENDMENTS TO THE EXISTING TRAFFIC SEPERATION SCHEME “IN THE STRAITS OF DOVER AND ADJACENT WATERS”**

1 The existing separation line passing through the F3 station is deleted.

2 The geographical positions of the boundary for the new “Precautionary Area” around the F3 Station Buoy are as follows (co-ordinates are based on WGS 84 Datum):

- |     |              |               |
|-----|--------------|---------------|
| (1) | 51° 26'.01 N | 002° 02'.67 E |
| (2) | 51° 25'.31 N | 002° 03'.81 E |
| (3) | 51° 23'.23 N | 001° 58'.69 E |
| (4) | 51° 22'.76 N | 001° 59'.59 E |

3 The position of the F3 Station Buoy and the area surrounding it in *IMO Ships’ Routeing, 7<sup>th</sup> Edition 1999, Part D, I/4* remains unchanged.

4 Recommended direction of traffic flow arrows is inserted in accordance with convention for ships crossing the Precautionary Area around the F3 Station, passing the buoy and leaving it on their own port side as follows:

- .1 to the northeast of the F3 Station Buoy indicating a north-westerly traffic flow;  
and
- .2 to the southwest of the F3 Station Buoy indicating a south-easterly traffic flow.

\*\*\*

## ANNEX 2

## ROUTEING MEASURES OTHER THAN TRAFFIC SEPARATION SCHEMES

**AMENDMENT TO THE EXISTING AREA TO BE AVOIDED: CS4 BUOY, DOVER STRAIT**

(Reference charts: British Admiralty 1610, 2001; 1828, 2002 edition.

**Note:** These charts are based on WGS 84 Datum)

**Description of the area to be avoided**

All ships should avoid the area within a circle of radius 0.3 miles centred upon the following geographical position:

51° 08'.668 N                      001° 34'.020 E

This area is established to avoid hazard to the navigational aid which is established at the above geographical position, and which is considered vital to the safety of navigation.

**NEW AREAS TO BE AVOIDED AND PRECAUTIONARY AREA****THE ROSARIO ISLANDS AND SALMEDINA BANK**

Reference chart: Mar Caribe – República de Colombia – Punta Comisario a Punta Canoas, COL 409 (2<sup>nd</sup> Edition, 2004). According to surveys conducted by the Colombian Navy in collaboration with the United States Navy Oceanography Office; coastline based on chart DMA (US Defense Mapping Agency) 24504.

WGS 84 Datum.

**Description of Areas to be Avoided: from Punta Comisario to Punta Canoas**

In order to prevent the risks of pollution and environmental damage in highly sensitive sea areas, all tankers and ships over 500 gross tonnage carrying oil or dangerous bulk cargo as cargo should avoid the following areas:

**(a) Rosario islands:**

Area bounded by a line joining the following geographical positions:

(1)	10° 08'.00 N	075° 41'.95 W
(2)	10° 07'.40 N	075° 42'.65 W
(3)	10° 07'.35 N	075° 48'.70 W
(4)	10° 04'.00 N	075° 50'.45 W
(5)	10° 01'.30 N	075° 54'.00 W
(6)	10° 01'.70 N	075° 55'.80 W
(7)	10° 04'.80 N	075° 55'.58 W
(8)	10° 10'.70 N	075° 51'.85 W
(9)	10° 15'.55 N	075° 44'.40 W

- |      |              |               |
|------|--------------|---------------|
| (10) | 10° 12'.87 N | 075° 41'.80 W |
| (11) | 10° 12'.87 N | 075° 40'.00 W |
| (12) | 10° 15'.02 N | 075° 37'.70 W |

(b) **Bancos:**

Circular area of one mile radius, with its centre at the following geographical position:

- |      |              |               |
|------|--------------|---------------|
| (13) | 10° 16'.65 N | 075° 38'.30 W |
|------|--------------|---------------|

(c) **Banco de Salmedina:**

Circular area of 2.5 miles radius, with its centre at the following geographical position:

- |      |              |               |
|------|--------------|---------------|
| (14) | 10° 22'.59 N | 075° 39'.90 W |
|------|--------------|---------------|

And bounded by a line joining the following points:

- |      |              |               |
|------|--------------|---------------|
| (15) | 10° 20'.79 N | 075° 38'.17 W |
| (16) | 10° 22'.65 N | 075° 42'.41 W |

## THE GULF OF MORROSQUILLO

Reference chart: Mar Caribe – República de Colombia – Isla Fuerte a Punta Barú, COL 410 (2<sup>nd</sup> Edition, 2004). According to surveys conducted by the Colombian navy in collaboration with the United States Oceanography Office co-operation programme. Coastline based on DMA topographical maps Nos.1968, 1789, 1790, 1791, and map No.36 of the Agustín Codazzi Geographical Institute.  
WGS 84 Datum.

### Description of Areas to be Avoided: Gulf of Morrosquillo

In order to prevent the risks of pollution and environmental damage in highly sensitive sea areas, all tankers and ships over 500 gross tonnage carrying oil or dangerous bulk cargo as cargo should avoid the following areas:

The Gulf of Morrosquillo has five areas to be avoided and one precautionary area.

#### Areas to be Avoided:

(a) **Fuerte island:**

Circular area of 3.2 miles radius, with its centre at the following geographical position:

- |     |              |               |
|-----|--------------|---------------|
| (1) | 09° 22'.65 N | 076° 10'.80 W |
|-----|--------------|---------------|

(b) **Roca Morrosquillo:**

Circular area of 1.3 miles radius, with its centre at the following geographical position:

- |     |              |               |
|-----|--------------|---------------|
| (2) | 09° 35'.50 N | 075° 59'.52 W |
|-----|--------------|---------------|

(c) **San Bernardo islands:**

Area bounded by a line joining the following geographical positions:

(3)	09° 38'.40 N	075° 51'.70 W
(4)	09° 40'.00 N	075° 57'.50 W
(5)	09° 50'.00 N	075° 57'.05 W
(6)	09° 52'.20 N	075° 52'.65 W
(7)	09° 50'.00 N	075° 44'.31 W
(8)	09° 47'.00 N	075° 43'.30 W
(9)	09° 44'.40 N	075° 48'.55 W
(10)	09° 42'.13 N	075° 48'.20 W

(d) **Palma island:**

Area bounded by a line joining the following geographical positions:

(11)	09° 44'.70 N	075° 46'.40 W
(12)	09° 43'.20 N	075° 44'.06 W
(13)	09° 44'.50 N	075° 43'.29 W
(14)	09° 45'.90 N	075° 42'.85 W
(15)	09° 45'.75 N	075° 45'.36 W

(e) **Bajo:**

Area bounded by a line joining the following geographical positions:

(16)	09° 47'.95 N	075° 40'.85 W
(17)	09° 48'.40 N	075° 40'.60 W
(18)	09° 47'.79 N	075° 39'.00 W
(19)	09° 46'.65 N	075° 39'.90 W

**Precautionary area:**

(a) **San Bernardo islands:**

(21)	09° 39'.82 N	075° 35'.85 W
(3)	09° 38'.40 N	075° 51'.70 W
(10)	09° 42'.13 N	075° 48'.20 W
(9)	09° 44'.40 N	075° 48'.55 W
(8)	09° 47'.00 N	075° 43'.30 W
(7)	09° 50'.00 N	075° 44'.31 W
(20)	09° 50'.00 N	075° 37'.17 W

**AREAS TO BE AVOIDED BY SHIPS TRANSITING THE CANARY ISLANDS**

(Reference chart No.209 in the catalogue of charts of the Spanish Navy Hydrographical Institute, second edition 1968, 12<sup>th</sup> impression 2003)

**Note:** This chart is based on WGS 84 Datum

### **Description of the areas to be avoided**

In order to prevent the risks of pollution and environmental damage in highly sensitive sea areas, all tankers and ships over 500 gross tonnage carrying oil or dangerous bulk cargo as cargo should avoid the following areas:

#### **Off Lanzarote Island (biosphere reserve)**

An area contained between the meridians of longitude 013° 15'.00 W and 013° 39'.00 W and the parallels of latitude 29° 07'.00 N and 29° 30'.00 N.

#### **Off the island of Tenerife (cetacean breeding ground)**

An area, between the meridian of longitude 017° 22'.00 W and the south coast of the island and the parallels of latitude 28° 00'.00 N and 28° 21'.00 N.

#### **Off the Island of Grand Canary (cetacean breeding ground)**

An area contained between the meridian of longitude 016° 00'.00 W and the coast and the parallels of latitude 27° 44'.00 N and 28° 00'.00 N.

#### **Off La Palma island (biosphere reserve)**

An area contained between the meridians of longitude 017° 35'.00 W and 018° 00'.00 W and the parallels of latitude 28° 17'.00 N and 29° 00'.00 N.

#### **Off the Island of El Hierro (biosphere reserve)**

An area contained within the Canary Islands between the parallel of latitude 28° 00'.00 N, the meridians of longitude 017° 42'.00 W and 018° 21'.00 W and the co-ordinates 27° 48'.00 N 017° 11'.00 W, 27° 23'.00 N 017° 58'.00 W and 27° 36'.00 N 018° 25'.00 W.

\*\*\*

## ANNEX 3

**DRAFT ASSEMBLY RESOLUTION A....(24)  
(adopted on xxxx 2005)****ADOPTION OF AMENDMENTS TO THE EXISTING MANDATORY SHIP  
REPORTING SYSTEM “IN THE GREAT BELT TRAFFIC AREA”**

THE ASSEMBLY,

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

RECALLING FURTHER resolution A.858(20) by which the Assembly, recognizing the need for an expeditious adoption and amendment procedure for the adoption and amendments of traffic separation schemes, routing measures other than traffic separation schemes, including designation and substitution of archipelagic sea lanes, and ship reporting systems for the purposes of the International Regulation for Preventing Collisions at Sea, 1972, resolved that the function of adoption traffic separation schemes, routing measures other than traffic separation schemes, including designation and substitution of archipelagic sea lanes, and ship reporting systems shall be performed by the Maritime Safety Committee on behalf of the Organization,

RECALLING ALSO that the mandatory ship reporting system “In the Great Belt Traffic Area” had been adopted on 3 December 1996 by resolution MSC.63(67), Annex 1,

NOTING the urgent need to implement the amendments to the existing ship reporting system “In the Great Belt Traffic Area” to improve safety of navigation in the area concerned,

TAKING INTO ACCOUNT the guidelines and criteria for ship reporting systems adopted by resolution MSC.43(64), as amended by resolutions MSC.111(73) and MSC.189(79),

HAVING CONSIDERED the recommendations of the Sub-Committee on Safety on Navigation at its fifty-first session,

1. ADOPTS in accordance with SOLAS regulation V/11, the amendments to the existing mandatory ship reporting system “In the Great Belt Traffic Area”;
2. DECIDES that the said amendments to the existing mandatory ship reporting system “In the Great Belt Traffic Area” will enter into force at [0000] hours UTC on [1 July 2006]; and
3. REQUESTS the Secretary-General to bring this resolution and its Annex to the attention of the Member Governments and Contracting Governments to the 1974 SOLAS Convention.

ANNEX

**AMENDMENTS TO THE EXISTING MANDATORY SHIP REPORTING SYSTEM  
“IN THE GREAT BELT TRAFFIC AREA”**

**Amend sub-section 2.2 to read as follows:**

2.2 The reference charts are Danish charts Nos.141 (17 edition), 142 (14 edition) and 143 (15 edition) (Datum: World Geodetic System 1984, WGS-84), which provide large-scale coverage of the VTS area.

**Amend sub-section 3.3 to read as follows:**

3.3 *Position for submitting reports*

3.3.1 Ships shall submit their reports when entering the VTS area defined by the following reporting lines, which are also identical to the boundaries of the VTS area:

*Southbound ships:* When passing latitude 55° 35'.00 N.

*Northbound ships:* When passing a line connecting the following points:

Stignæs:	55° 12'.00 N,	011° 15'.40 E (Gulfs Oil's Pier)
Omø	55° 08'.40 N,	011° 09'.00 E (Ørespids, Omø)
	55° 05'.00 N,	011° 09'.00 E (At sea South of Ørespids)
Langeland E:	55° 05'.00 N,	010° 56'.10 E (Snøde Øre)
Langeland W:	55° 00'.00 N,	010° 48'.70 E (South of Korsebølle Rev)
Thurø Rev:	55° 01'.20 N,	010° 44'.00 E (Thurø Rev Lightbuoy)

**Add a new sub-section 3.3.2 as follows:**

3.3.2 Ships shall submit their reports on departure from a port within the VTS area.

\*\*\*

## ANNEX 4

## DRAFT RESOLUTION MSC.....(81)

(adopted on (...) May 2006)

## MANDATORY SHIP REPORTING SYSTEM FOR THE CANARY ISLANDS

THE MARITIME SAFETY COMMITTEE,

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

RECALLING ALSO regulation V/11 of the International Convention for the Safety of Life at Sea, 1974 (SOLAS Convention), in relation to the adoption of mandatory ship reporting systems by the Organization,

RECALLING FURTHER resolution A.858(20) resolving that the function of adopting ship reporting systems shall be performed by the Committee on behalf of the Organization,

TAKING INTO ACCOUNT the “Guidelines and Criteria for Ship Reporting Systems”, adopted by resolution MSC.43(64) and amended by resolutions MSC.111(73) and MSC.181(79),

HAVING CONSIDERED the recommendations of the Sub-Committee on Safety of Navigation at its fifty-first session,

1. ADOPTS, in accordance with the provisions of SOLAS regulation V/11, the mandatory ship reporting system for the Canary Islands, as described in the Annex to the present resolution;
2. DECIDES that this mandatory ship reporting system shall enter into force at 0000 hours UTC on [1 December 2006]; and
3. REQUESTS the Secretary-General to bring this resolution and its annex to the attention of SOLAS Contracting Governments and Members of the Organization that are not parties to the Convention.

ANNEX 1

**DESCRIPTION OF THE MANDATORY SHIP REPORTING SYSTEM FOR  
THE CANARY ISLANDS**

A mandatory reporting system for ships in the Canary Islands (CANREP) is established in the Canary Islands.

**1 Types of ship required to take part in the system**

1.1 Ships required to take part in the CANREP system:

Tankers of 600 deadweight tonnage and upwards, either transiting the Canary Islands or sailing to or from Canarian ports or involved in inter-island navigation, carrying the following:

- heavy-grade crude oils with a density greater than 900 kg/m<sup>3</sup> at 15°C;
- heavy fuel oils with a density greater than 900 kg/m<sup>3</sup> at 15°C or kinematic viscosity greater than 180 mm<sup>2</sup>/s at 50°C;
- bitumen, coal tar and their emulsions.

**2 Geographical limits of the Canary Islands reporting area**

2.1 The proposed maritime area is bounded by a polygonal line connecting points along the outer limit of the territorial sea (12 nautical miles) that surrounds the archipelago, and having the following inflection points (see chartlet in appendix 3):

<b>Point</b>	<b>Latitude</b>	<b>Longitude</b>
A	28° 56' N	018° 13' W
B	29° 04' N	017° 47' W
C	28° 48' N	016° 04' W
D	28° 22' N	015° 19' W
E	28° 19' N	014° 36' W
F	29° 37' N	013° 39' W
G	29° 37' N	013° 19' W
H	29° 17' N	013° 06' W
I	27° 57' N	013° 48' W
J	27° 32' N	015° 35' W
K	27° 48' N	016° 45' W
L	27° 48' N	017° 11' W
M	27° 23' N	017° 58' W
N	27° 36' N	018° 25' W

2.2 The reference chart is No.209 of the Spanish Navy Hydrographical Institute (Datum WGS 84).

### **3 Format and content of reports; time and geographical position for submitting reports; authority to which they must be sent; available services**

#### **3.1 Format**

3.1.1 CANREP reports must be sent to one of the Maritime Rescue Co-ordination Centres listed in appendix 1 and drafted in accordance with the format described in appendix 2.

3.1.2 The reporting format conforms with paragraph 2 of the appendix to resolution A.851(20).

#### **3.2 Content**

3.2.1 The reports to be submitted by participating ships must contain the information needed to achieve the system's aims:

- .1 the ship's name, call sign, IMO or MMSI number and position are necessary in order to establish its identity and initial position (A, B and C);
- .2 the ship's course, speed and destination are important for monitoring its track and launching search and rescue measures should information about it fail to appear on the screen, for ensuring safe navigation, and for preventing pollution in areas where weather conditions are extreme (E, F, G and I);
- .3 the number of people on board, and other relevant information, are important factors when it comes to assigning the resources for a search and rescue operation (P, T and W);
- .4 in accordance with the relevant provisions of the SOLAS and MARPOL Conventions, ships are required to supply information on defects, damage, deficiencies and other limitations (under Q), as well as other information (under X).

#### **3.3 Time and geographical position for submitting reports**

3.3.1 Ships must submit a report:

- .1 on entering the reporting area as defined in paragraph 2; or
- .2 immediately after leaving a port, terminal or anchorage situated in the reporting area; or
- .3 when deviating from the route leading to the originally declared destination, port, terminal, anchorage or position "for orders" given on entry into the reporting area; or
- .4 when it is necessary to deviate from the planned route owing to weather conditions, damaged equipment or a change in navigational status; and
- .5 on finally leaving the reporting area.

3.3.2 Ships are not required to send a report if, during normal sailing through the reporting area, they cross the area's boundary on other occasions apart from initial entry or final departure.

### **3.4 Land-based authorities to which reports must be sent**

3.4.1 On entering the CANREP reporting area, ships must report the fact to one of the MRCCs listed in appendix 1, according to the following criteria:

- (i) Ships that enter the CANREP reporting area at a position east of the meridian of longitude 015° 30' W should notify the Las Palmas MRCC.
- (ii) Ships that enter the reporting area at a position west of the meridian of longitude 015° 30' W should notify the Tenerife MRCC.

3.4.2 On leaving the CANREP reporting area, ships must report the fact to the same MRCC to which they reported on entry.

3.4.3 Reports must be completed in accordance with the format shown in appendix 2.

3.4.4 Reports may be sent by any means capable of being received by the media indicated in appendix 1.

## **4 Information to be provided to participating ships and procedures to be observed**

4.1 When requested, the MRCCs listed in appendix 1 should provide ships with information vital to navigational safety in the ship's reporting area, using their broadcasting equipment.

4.2 If necessary, any ship may ask for information on its own behalf about specific local conditions.

## **5 Requirements regarding radiocommunications for the system, reporting frequencies and information to be reported**

5.1 The Maritime Rescue Co-ordination Centres to which reports must be sent are listed in appendix 1.

5.2 The reports completed by a ship on entering and passing through the reporting area must begin with the word CANREP and include a two-letter abbreviation to indicate their type (sailing plan, final report or deviation report). Reports with these prefixes may be sent free of cost.

5.3 Depending on the type of report, the following information must be included, as described in paragraph 6 of appendix 2:

- A: Ship's identity (name, call sign, IMO No. and MMSI No.);
- B: Date and time;
- C: Position;
- E: True course;
- F: Speed;
- G: Name of last port of call;
- I: Name of next port of call and estimated time of arrival;
- P: Type(s) of cargo, quantity and IMO classification if carrying potentially dangerous goods;
- Q: Used in the event of defects or deficiencies that impair normal navigation;

- T: Address for communication of cargo information;  
W: Number of people on board;  
X: Miscellaneous information relating to tankers:  
- estimated quantity and characteristics of bunker fuel for tankers carrying an amount of it greater than 5,000 tonnes;  
- navigational status (e.g. moving under own propulsion, limited manoeuvrability, etc.).

5.4 The reporting format must be consistent with resolution A.851(20).

## **6 Regulations in force in the area covered by the system**

### *6.1 Regulations on collision prevention*

The International Regulations for Preventing Collisions at Sea (COLREG) 1972, as amended, applies throughout the area covered by the system.

## **7 Shore-based establishments responsible for operation of the system**

7.1 The MRCCs to which these reports must be sent are listed in appendix 1.

7.2 The MRCCs or any other establishment forming part of the service are to be manned constantly.

7.3 The training given to MRCC staff must comply with the national and international recommendations and include a general study of navigational safety measures and the relevant national and international (IMO) provisions.

7.4 All means of communication that can be received by the media indicated in Appendix 1 are acceptable.

## **8 Action to take in the event of a ship's non-compliance with system requirements**

8.1 The system's objectives are to initiate maritime search and rescue and anti-pollution measures as quickly and effectively as possible if an emergency is reported or if a ship that is supposed to report does not and no contact can be established with it. All possible means will be deployed to obtain the participation of the ships required to send in reports. Should these fail to materialize and the offending ship can be identified beyond doubt, the competent authorities in the relevant flag State will be informed with a view to their investigating the situation and possibly starting legal proceedings under their national legislation. The CANREP mandatory ship reporting system exists only for the exchange of information, and does not confer additional powers to impose change in a ship's operations. The reporting system will be implemented in accordance with the provisions of UNCLOS, the SOLAS Convention and other relevant international instruments, and the reporting system will not constitute a basis for preventing the passage of a ship in transit through the reporting area.

APPENDIX 1

**Installations to which reports must be sent (positions sent to WGS-84)**

**MRCC Tenerife**      28° 28' N  
                              016° 14' W

Tel.:                    +34 900 202 111.

E-mail:                canrep.tenerife@sasemar.es

VHF channels:        16 and 70

MF channels:         2182

**Automatic identification system (AIS)**

**MRCC Las Palmas**    28° 09' N  
                              015° 25' W

Tel.:                    +34 900 202 112.

E-mail:                canrep.laspalmas@sasemar.es

VHF channels:        16 and 70

MF channels:         2182

**Automatic identification system (AIS)**

## APPENDIX 2

### **Mandatory reporting system for the Canary Islands (CANREP)**

#### *Instructions for reports*

- 1 Ships heading for the reporting area of the Canary Islands must send a report:
  - .1 on entering the reporting area; or
  - .2 immediately after leaving a port, terminal or anchorage situated in the reporting area; or
  - .3 when deviating from the route leading to the originally declared destination, port, terminal, anchorage or position “for orders” given on entry into the reporting area; or
  - .4 when it is necessary to deviate from the planned route owing to weather conditions, damaged equipment or when information under Q is required; and
  - .5 on finally leaving the reporting area.
- 2 Ships are not required to send a report if, during normal sailing through the reporting area, they cross the area’s boundary on other occasions apart from initial entry or final departure.
- 3 On entering the CANREP reporting area, ships must report the fact to one of the MRCCs listed in Appendix 1, according to the following criteria:
  - (i) Ships that enter the CANREP reporting area at a position east of the meridian of longitude 015° 30’ W should notify the Las Palmas MRCC.
  - (ii) Ships that enter the reporting area at a position west of the meridian of longitude 015° 30’ W should notify the Tenerife MRCC.
- 4 On leaving the CANREP reporting area, ships must report the fact to the same MRCC to which they reported on entry.
- 5 Every report must begin with the word CANREP and a two-letter abbreviation enabling the type of report to be identified. Messages with this prefix will be sent free of charge and treated as URGENT.
- 6 Reports must be in accordance with the following table. Sections A, B, C, E, F, G, I, P, T, W and X are compulsory for sailing plans, A, B, C, E and F for final reports, and A, B, C, E, F and I for deviation reports. The Q designation is included whenever a problem arises in the reporting area, be it defects, damage, deficiencies or circumstances, that affects normal navigation.

<b>Designator</b>	<b>Function</b>	<b>Text</b>
Name of system	Code word	CANREP
	Type of report: Sailing plan: Final report:  Deviation report	One of the following 2-letter identifiers SP FR (on <u>finally</u> leaving reporting area) to include only <b>A, B, C, E and F</b> . DR to include only <b>A, B, C, E, F and I</b> .
A	Ship	Name and call sign (Name of ship, call sign, IMO No. and MMSI No.), (e.g. NONESUCH/KTOI)
B	Date and time corresponding to position at C, expressed as UTC.	A six-digit group followed by a Z. The first two digits indicate day of the month, the second two the hours and the last two the minutes. The Z indicates that the time is given in UTC (e.g. 081340Z).
C	Position (latitude and longitude)	A 4-digit group giving latitude in degrees and minutes, with the suffix N, and a 5-digit group giving longitude in degrees and minutes, with the suffix W (e.g. 2836N or 01545W).
E	Course	True course. A 3-digit group (e.g. 210).
F	Speed	Speed in knots. A 2-digit group (e.g. 14).
G	Name of last port of call	Name of the last port of call (e.g. Strait of Gibraltar)
I	Destination and ETA (UTC)	Name of destination and date and time group as expressed in B (e.g. Cape Town 181400Z)
P	Cargo	Type(s) of cargo, and quantity and IMO classification if carrying potentially dangerous goods.
Q	Defects, damage, deficiencies, limitations.	Brief details of defects, including damage, deficiencies and other circumstances that impair normal navigation.
T	Address for the communication of cargo information	Name, tel No. and fax, e-mail or URL.
W	Total number of people on board	State number
X	Miscellaneous	Miscellaneous information concerning those tankers: Characteristics and approximate quantity of bunker fuel for tankers carrying an amount of it greater than 5,000 tonnes Navigational status (e.g. moving under own propulsion, at anchor, no steering, limited manoeuvrability, depth restriction, moored, aground, etc.)

7 The **sailing plan** (SP) is sent as an initial report:

- (a) When entering the reporting area, as defined in paragraph 2.1.
- (b) On leaving the last port of call located in the reporting area.

Example:

Name of station to which report must be sent: CANREP – SP

- A. GOLAR STIRLING/9001007
- B. 261520Z
- C. 2836N01545W
- E. 210
- F. 15
- G. STRAIT OF GIBRALTAR
- I. CAPE TOWN 230230Z
- P. 56,000 TONNES HEAVY FUEL OILS
- T. J Smith, 00 47 22 31 56 10, Fax 00 47 22 31 56 11
- W. 23
- X. NONE, NONE

8 The final report (FR) is sent:

- (a) When leaving the reporting area.
- (b) On arrival at a port of destination located in the reporting area.

Example:

Name of station to which report must be sent: CANREP – FR

- A. GOLAR STIRLING/9001007
- B. 261805Z
- C. 2802N01614W
- E. 175
- F. 16

9 The deviation report (DR) is sent:

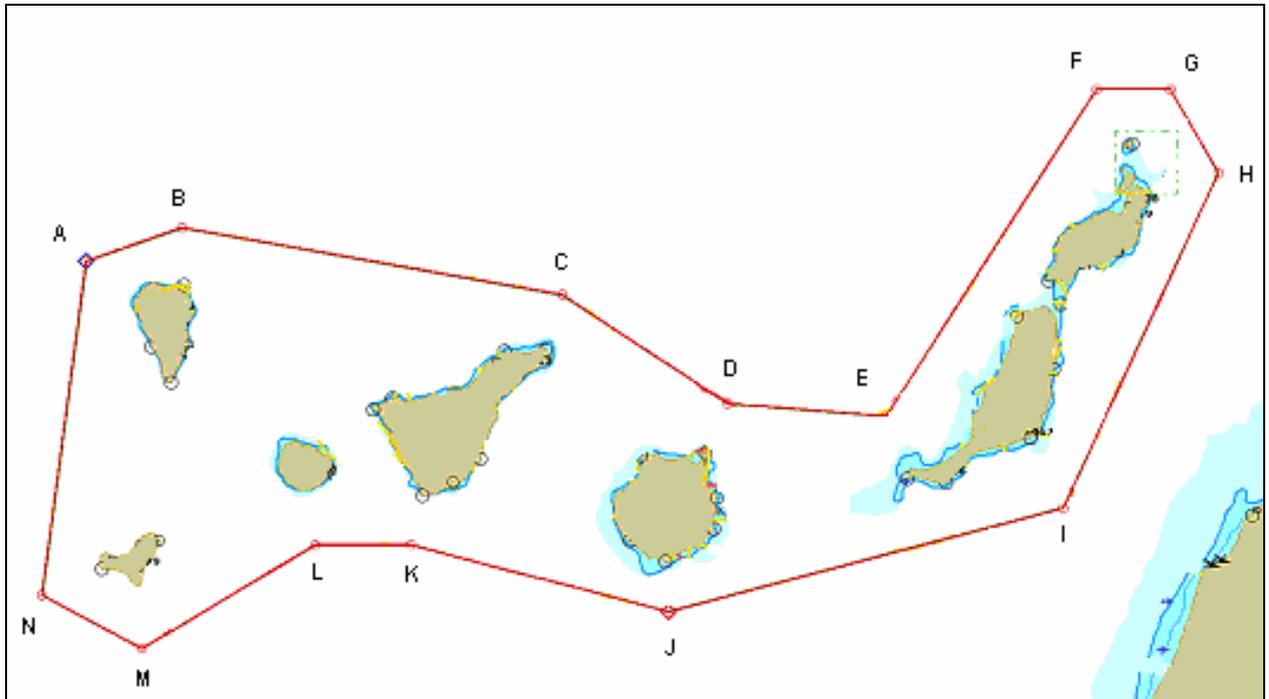
- (a) When deviating from the route leading to the originally declared destination, port, terminal, anchorage or position “for orders” given on entry into reporting area.
- (b) When it is necessary to deviate from the planned route owing to weather conditions, damage to equipment or a change in navigational status.

Example: Name of station to which report must be sent: CANREP – FR

- A. GOLAR STIRLING/9001007
- B. 261605Z
- C. 2821N01557W
- E. 280
- F. 14
- I. SANTA CRUZ DE TENERIFE 261645Z
- X. NONE, SATISFACTORY.

APPENDIX 3

CHARTLET



## ANNEX 2

### SUMMARY

#### **1 Types of ship required to participate in the system**

##### 1.1 Ships required to take part in the CANREP mandatory reporting system:

Tankers of 600 deadweight tonnage and upwards, either transiting the Canary Islands or sailing to or from Canarian ports or involved in inter-island navigation, carrying the following:

- heavy-grade crude oils with a density greater than 900 kg/m<sup>3</sup> at 15°C;
- heavy fuel oils with a density greater than 900 kg/m<sup>3</sup> at 15°C or kinematic viscosity greater than 180 mm<sup>2</sup>/s at 50°C;
- bitumen, coal tar and their emulsions.

#### **2 Geographical position for submitting reports**

Ships travelling towards the Canary Island reporting area or leaving it must report:

- .1 on entering the reporting area; or
- .2 immediately after leaving a port, terminal or anchorage located in the reporting area; or
- .3 when deviating from the route leading to the originally declared destination, port, terminal, anchorage or position “for orders” given on entry into the reporting area; or
- .4 when it is necessary to deviate from the planned route owing to weather conditions, damaged equipment or a change in navigational status; and
- .5 on finally leaving the reporting area.

#### **Reference charts**

The reference chart is No.209 of the Spanish Navy Hydrographic Institute (Datum WGS-84).

#### **3 Reporting format**

- A: Ship’s identity (name, call sign, IMO No. and MMSI No.);  
B: Date and time;  
C: Position;  
E: True course;  
F: Speed;

- G: Name of last port of call;
- I: Name of next port of call and estimated time of arrival;
- P: Type(s) of cargo, quantity and IMO classification if carrying potentially dangerous goods;
- Q: Used in the event of defects or deficiencies that affect normal navigation;
- T: Address for communication of information on cargo;
- W: Number of people on board;
- X: Various particulars relating to tankers:
  - estimated quantity and characteristics of bunker fuel for tankers carrying an amount of it greater than 5,000 tonnes;
  - navigational status (e.g. moving under own propulsion, limited manoeuvrability, etc.).

#### **4 Shore-based authorities to which reports must be sent**

4.1 On entering the CANREP reporting area, ships must report the fact to one of the MRCCs listed in appendix 1, according to the following criteria:

- (i) Ships entering the CANREP reporting area at a position east of the meridian of longitude 015° 30' W should notify the Las Palmas MRCC.
- (ii) Ships entering the reporting area at a position west of the meridian of longitude 015° 30' W should notify the Tenerife MRCC.

4.2 On leaving the CANREP reporting area, ships must report the fact to the same MRCC to which they reported on entry.

#### **5 Telecommunications**

Reports may be sent cost-free by any means capable of being received by the media indicated in appendix 1.

\*\*\*

## ANNEX 5

**DRAFT ASSEMBLY RESOLUTION A....(24)  
(adopted on xxxx 2005)****SHIPS' ROUTEING – ESTABLISHMENT OF AN AREA TO BE AVOIDED IN THE  
GALAPAGOS ARCHIPELAGO**

THE ASSEMBLY,

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

RECALLING ALSO resolution A.858(20) by which the Assembly, recognizing the need for an expeditious adoption and amendment procedure for traffic separation schemes, routeing measures other than traffic separation schemes, including the designation and substitution of archipelagic sea lanes, and ship reporting systems, resolved that all the aforementioned functions should be performed by the Maritime Safety Committee on behalf of the Organization,

RECALLING FURTHER that the Galapagos Archipelago and its surrounding waters have been declared a national and world heritage site, recognized worldwide for its scientific and cultural importance,

NOTING the urgent need and importance to implement the new area to be avoided in the Galapagos Archipelago proposed by the Government of Ecuador in order to enhance maritime safety, safety of navigation and protection of the marine environment in the area concerned, and the invitation by the Maritime Safety Committee at its eightieth session to the Assembly to adopt the proposed new area to be avoided, subject to the Sub-Committee on Safety of Navigation being satisfied that all the pertinent criteria had been met,

NOTING ALSO the urgent need to safeguard the unique ecological system in the Galapagos Archipelago,

TAKING INTO ACCOUNT the Guidelines for the Identification and Designation of Particularly Sensitive Sea Areas adopted by resolution A.927(22),

HAVING CONSIDERED the report of the Maritime Safety Committee on its eightieth session and the recommendations of the Sub-Committee on Safety of Navigation at its fifty-first session,

1. ADOPTS the new Area to be Avoided in the Galapagos Archipelago as set out in Annex to the present resolution, for implementation at 0000 hours UTC on [1 July 2006]; and
2. REQUESTS the Secretariat to issue, as soon as possible, a SN circular containing the aforementioned Area to be Avoided.

ANNEX

**ESTABLISHMENT OF AN AREA TO BE AVOIDED IN THE GALAPAGOS  
ARCHIPELAGO**

Reference chart I.O.A.2 (1<sup>st</sup> Edition, 2003)

Datum Provisional America del Sur 1956 (La Canoa, Venezuela)

**Description of the Area to be Avoided**

All ships and barges carrying cargoes of oil or hazardous material and all ships of 500 gross tonnage and above solely in transit should avoid the area bounded by a line connecting the following geographical positions.:

(1)	02° 30'.02 N	092° 21'.27 W
(2)	01° 26'.13 N	089° 03'.39 W
(3)	00° 00'.50 S	088° 05'.61 W
(4)	00° 11'.70 S	088° 00'.63 W
(5)	00° 34'.70 S	087° 54'.42 W
(6)	01° 02'.01 S	087° 52'.81 W
(7)	02° 34'.87 S	088° 48'.15 W
(8)	02° 46'.00 S	089° 29'.54 W
(9)	02° 41'.80 S	090° 42'.06 W
(10)	02° 05'.01 S	092° 17'.53 W
(11)	01° 31'.83 S	092° 43'.77 W
(12)	01° 48'.88 N	092° 40'.36 W

\*\*\*

## ANNEX 6

**DRAFT ASSEMBLY RESOLUTION A....(24)  
(adopted on xxxx 2005)****SHIPS' ROUTEING**

THE ASSEMBLY,

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

RECALLING ALSO resolution A.858(20) by which the Assembly, recognizing the need for an expeditious adoption and amendment procedure for traffic separation schemes, routeing measures other than traffic separation schemes, including the designation and substitution of archipelagic sea lanes, and ship reporting systems, resolved that all the aforementioned functions should be performed by the Maritime Safety Committee on behalf of the Organization,

NOTING the urgent need to implement the new traffic separation schemes in Bornholmsgat and North of Rügen and amendments to the traffic separation schemes Off Gotland Island and South of Gedser; a recommended deep-water route in the eastern Baltic Sea, and new areas to be avoided at Hoburgs Bank and Norra Midsjöbanken proposed by the Governments of Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland and Sweden in order to enhance maritime safety, safety of navigation and protection of the marine environment in the area concerned, and the invitation by the Maritime Safety Committee at its eightieth session to the Assembly to adopt the routeing systems, subject to the Sub-Committee on Safety of Navigation being satisfied that all the pertinent criteria had been met,

TAKING INTO ACCOUNT the Guidelines for the Identification and Designation of Particularly Sensitive Sea Areas adopted by resolution A.927(22),

HAVING CONSIDERED the report of the Maritime Safety Committee on its eightieth session and the recommendations of the Sub-Committee on Safety of Navigation at its fifty-first session,

1. ADOPTS the new traffic separation schemes in Bornholmsgat and North of Rügen and amendments to the traffic separation schemes Off Gotland Island and South of Gedser, set out in Annex 1 to the present resolution;
2. ADOPTS ALSO the new recommended deep-water route in the eastern Baltic Sea and the new areas to be avoided at Hoburgs Bank and Norra Midsjöbanken, set out in Annex 2 to the present resolution;
3. DECIDES that new routeing systems will be implemented at 0000 hours UTC on [1 July 2006]; and
4. REQUESTS the Secretariat to issue, as soon as possible, the relevant COLREG.2 and SN circular containing the aforementioned routeing systems.

ANNEX 1

**NEW AND AMENDED TRAFFIC SEPARATION SCHEMES AND ASSOCIATED  
ROUTEING MEASURES IN SW BALTIC SEA**

**NEW TRAFFIC SEPARATION SCHEME IN BORNHOLMSGAT**

Reference chart: German Chart No: 40 (6<sup>th</sup> Edition, 1998)

**Note:** This chart is based on World Geodetic System 1984 Datum (WGS-84)

The new traffic separation scheme (TSS) in Bornholmsgat consists of:

- Two traffic lanes 2.7 miles wide in three parts;
- One intermediate traffic separation zone 0.8 miles wide in three parts;
- Two associated inshore traffic zones;
- One precautionary area between the three parts.

The direction (T) of navigation is:

- TSS, main part between Sweden and Bornholm: 038° northeastbound course and 218° southwestbound course; and
- TSS, south west part: 071° and 038° northeastbound courses and 218° and 251° southwestbound courses; and
- TSS, west part: 093° eastbound course and 273° westbound course.

**The co-ordinates listed below are in WGS-84**

**Description of the new traffic separation scheme Bornholmsgat:**

**Main part:**

(a) A separation zone bounded by a line connecting the following geographical positions:

- |     |               |                |
|-----|---------------|----------------|
| (1) | 55° 24'.584 N | 014° 37'.347 E |
| (2) | 55° 25'.246 N | 014° 36'.478 E |
| (3) | 55° 12'.526 N | 014° 18'.945 E |
| (4) | 55° 12'.034 N | 014° 20'.043 E |

(b) A traffic lane for eastbound traffic between the separation zone and a line connecting the following geographical positions:

- |     |               |                |
|-----|---------------|----------------|
| (5) | 55° 22'.339 N | 014° 40'.279 E |
| (6) | 55° 10'.367 N | 014° 23'.760 E |

(c) A traffic lane for westbound traffic between the separation zone and a line connecting the following geographical positions:

- |     |               |                |
|-----|---------------|----------------|
| (7) | 55° 27'.545 N | 014° 33'.615 E |
| (8) | 55° 14'.190 N | 014° 15'.221 E |

**Southwest part:**

- (d) A separation zone bounded by a line connecting the following geographical positions:

(9)	55° 06'.064 N	014° 11'.895 E
(10)	55° 06'.555 N	014° 10'.800 E
(11)	55° 02'.996 N	014° 05'.965 E
(12)	55° 02'.297 N	014° 02'.424 E
(13)	55° 01'.543 N	014° 02'.876 E
(14)	55° 02'.318 N	014° 06'.806 E

- (e) A traffic lane for eastbound traffic between the separation zone and a line connecting the following geographical positions:

(15)	55° 04'.397 N	014° 15'.603 E
(16)	55° 00'.020 N	014° 09'.653 E
(17)	54° 58'.987 N	014° 04'.404 E

- (f) A traffic lane for westbound traffic between the separation zone and a line connecting the following geographical positions:

(18)	55° 08'.220 N	014° 07'.086 E
(19)	55° 05'.291 N	014° 03'.113 E
(20)	55° 04'.852 N	014° 00'.893 E

**West part:**

- (g) A separation zone bounded by a line connecting the following geographical positions:

(21)	55° 10'.966 N	014° 05'.670 E
(22)	55° 11'.762 N	014° 05'.743 E
(23)	55° 11'.928 N	014° 00'.000 E
(24)	55° 11'.130 N	014° 00'.000 E

- (h) A traffic lane for eastbound traffic between the separation zone and a line connecting the following geographical positions:

(25)	55° 08'.220 N	014° 07'.086 E
(26)	55° 08'.428 N	014° 00'.000 E

- (i) A traffic lane for westbound traffic between the separation zone and a line connecting the following geographical positions:

(27)	55° 14'.461 N	014° 05'.990 E
(28)	55° 14'.630 N	014° 00'.000 E

**Precautionary area**

- (j) A precautionary area will be established by a line connecting the following geographical positions:

(29)	55° 10'.367 N	014° 23'.760 E
(30)	55° 14'.190 N	014° 15'.221 E
(31)	55° 14'.461 N	014° 05'.990 E
(32)	55° 10'.966 N	014° 05'.670 E
(33)	55° 08'.220 N	014° 07'.086 E
(34)	55° 04'.397 N	014° 15'.603 E

**Inshore traffic zone Sweden**

- (k) The limits of the inshore traffic zone along the Swedish coastline lies between the following geographical positions:

(35)	55° 23'.179 N	014° 27'.572 E
(36)	55° 28'.417 N	014° 17'.036 E
(37)	55° 23'.202 N	014° 11'.578 E
(38)	55° 14'.190 N	014° 15'.221 E

**Inshore traffic zone Denmark (Bornholm)**

- (l) The limits of the inshore traffic zone along the Danish coastline lies between the following geographical positions:

(39)	55° 17'.882 N	014° 46'.416 E
(40)	55° 22'.339 N	014° 40'.279 E
(41)	55° 13'.758 N	014° 28'.416 E
(42)	55° 11'.346 N	014° 42'.142 E

**NEW TRAFFIC SEPARATION SCHEME NORTH OF RÜGEN**

Reference chart: German Chart No: 40 (6<sup>th</sup> Edition, 1998)

**Note:** This chart is based on World Geodetic System 1984 Datum (WGS-84)

The new traffic separation scheme (TSS) north of Rügen consists of:

- Two traffic lanes 2 miles wide;
- One intermediate traffic separation zone 1 mile wide

The direction (T) of navigation is:

- TSS south lane: 071° eastbound course towards Bornholmshgat
- TSS north lane: 251° westbound course towards Kadettrennen

**The co-ordinates listed below are in WGS-84**

**Description of the new traffic separation scheme north of Rügen:**

- (a) North traffic separation line connecting following positions:
- |     |               |               |
|-----|---------------|---------------|
| (1) | 54° 54'.426 N | 13° 11'.332 E |
| (2) | 54° 52'.799 N | 13° 03'.121 E |

(b) A separation zone bounded by a line connecting the following positions:

- |     |               |               |
|-----|---------------|---------------|
| (3) | 54° 51'.590 N | 13° 13'.030 E |
| (4) | 54° 52'.535 N | 13° 12'.465 E |
| (5) | 54° 50'.908 N | 13° 04'.252 E |
| (6) | 54° 49'.962 N | 13° 04'.818 E |

(c) South traffic separation line connecting following positions:

- |     |               |               |
|-----|---------------|---------------|
| (7) | 54° 49'.699 N | 13° 14'.161 E |
| (8) | 54° 48'.071 N | 13° 05'.948 E |

(d) A traffic lane for westbound traffic is situated between the separation zone and the North traffic separation line.

(e) A traffic lane for eastbound traffic is situated between the separation zone and the South traffic separation line.

## **AMENDMENT TO THE TRAFFIC SEPARATION SCHEME OFF GOTLAND ISLAND**

### **RULE CONCERNING MAXIMUM DRAUGHT**

The following note shall be added to the traffic separation scheme “Off Gotland Island”:

**Note:**

Maximum draught in the traffic separation scheme is 12 metres. All ships bound to or from the northeastern Baltic Sea with a draught of more than 12 metres are recommended to use the deep-water route Off Gotland Island.

## **AMENDMENT TO THE TRAFFIC SEPARATION SCHEME SOUTH OF GEDSER NEW INSHORE TRAFFIC ZONE**

Reference chart: German Chart No: 163 (11<sup>th</sup> Edition, 2003)

**Note:** This chart is based on World Geodetic System 1984 Datum (WGS-84)

The new inshore traffic zone is situated between the TSS south of Gedser and the German coast.

**The co-ordinates listed below are in WGS-84**

### **Description of the new inshore traffic zone south of Gedser:**

The limits of the inshore traffic zone along the German coastline lies between the following positions:

- |     |               |               |
|-----|---------------|---------------|
| (1) | 54° 28'.407 N | 12° 29'.940 E |
| (2) | 54° 30'.761 N | 12° 17'.531 E |
| (3) | 54° 27'.161 N | 12° 15'.131 E |
| (4) | 54° 23'.332 N | 12° 09'.700 E |
| (5) | 54° 12'.883 N | 12° 09'.700 E |

## ANNEX 2

### DEEP WATER ROUTE OFF GOTLAND ISLAND

Reference charts: Swedish Chart Nos.7 and 8 (2001)

#### Description of the deep-water route

The deep-water route is established between the existing TSS Off Köpu peninsula and the proposed TSS Bornholmsgat and south of Hoburgs Bank and Norra Midsjöbanken situated south of the island of Gotland and is bounded by a line connecting the following geographical positions:

#### The co-ordinates listed below are in WGS-84

(1)	59° 05'.846 N	021° 27'.876 E
(2)	58° 59'.781 N	021° 42'.939 E
(3)	58° 12'.543 N	020° 22'.543 E
(4)	57° 58'.270 N	020° 24'.409 E
(5)	57° 22'.158 N	019° 41'.730 E
(6)	57° 18'.891 N	019° 52'.946 E
(7)	56° 22'.640 N	018° 42'.820 E
(8)	56° 17'.230 N	018° 51'.800 E
(9)	56° 00'.300 N	017° 40'.040 E
(10)	55° 53'.850 N	017° 43'.750 E
(11)	55° 39'.324 N	015° 11'.608 E
(12)	55° 35'.183 N	015° 29'.979 E
(13)	55° 27'.545 N	014° 33'.615 E
(14)	55° 22'.339 N	014° 40'.279 E

#### Notes:

- 1 The depths in the deep-water route, bounded by the line connecting positions (3) - (12) and approximately 6 miles wide, are confirmed by detailed hydrographic surveys in accordance with IHO standard S-44 in Swedish area of responsibility. The depths are nowhere less than 25 metres.
- 2 The areas bounded by the line connecting positions (1) – (4) and (11) - (14) are not yet surveyed in accordance with IHO standard S-44. The survey will be carried out not later than 2008.
- 3 All ships passing east and south of the island of Gotland bound to or from the northeastern part of the Baltic Sea, with a draught exceeding 12 metres are recommended to use the deep-water route.

## AREAS TO BE AVOIDED IN THE SOUTHERN BALTIC SEA SOUTH OF THE ISLAND OF GOTLAND

(Reference chart: Swedish chart No.8 (2001))

### Description of the areas to be avoided

For environmental protection of these sensitive areas, all ships with a gross tonnage of 500 or more, should avoid the areas.

The co-ordinates listed below are in WGS-84

(a) **Hoburgs Bank**

The area bounded by a line connecting the following geographical positions will be designated as an area to be avoided:

(1)	56° 49'.523 N	018° 38'.769 E
(2)	56° 40'.234 N	018° 45'.078 E
(3)	56° 24'.062 N	018° 36'.202 E
(4)	56° 22'.774 N	018° 08'.433 E
(5)	56° 34'.962 N	018° 06'.198 E

(b) **Norra Midsjöbanken**

The area bounded by a line connecting the following geographical positions will be designated as an area to be avoided:

(1)	56° 07'.873 N	017° 38'.408 E
(2)	56° 02'.172 N	017° 13'.172 E
(3)	56° 10'.097 N	017° 13'.682 E
(4)	56° 15'.016 N	017° 25'.612 E

**Note:** All vessels with a gross tonnage of 500 or more should avoid the areas.

\*\*\*



## ANNEX 7

**TERMS OF REFERENCE FOR THE CORRESPONDENCE GROUP ON INS AND IBS  
AND DRAFT STRUCTURE OF PERFORMANCE STANDARDS FOR INS**

The correspondence group should:

- .1 develop draft revised performance standards for INS based on documents NAV 51/4, NAV 51/4/4 and the outcome of the discussion in the Technical Working Group (NAV 51/WP.3/Add.1) regarding the draft structure, set out in the appendix. These performance standards should allow for the proper application of SOLAS regulation V/15 and overcome the limitations of the existing performance standards for INS;
- .2 include an alarm management module;
- .3 include considerations on how the human element and the interface with the bridge team and pilot should be addressed on items that are specific to the use of Integrated Navigation Systems;
- .4 include guidance to equipment manufacturers for the provision of onboard familiarization material, designed to quickly instruct a user, who would have previously completed a generic course on the use of INS, to become familiar with the actual INS equipment and configuration onboard the ship;
- .5 advise the way forward for the performance standards for IBS, bearing in mind the concerns raised with respect to the practicability of these standards;
- .6 establish liaison with the Sub-Committee on Ship Design and Equipment (DE) to ensure consistent treatment of alarm management; and
- .7 submit its report to NAV 52 for consideration.

## APPENDIX

### **Draft Structure of Performance Standards for INS**

- 1 Purpose**
- 2 Scope**
- 3 Application**
- 4 Definitions**

#### **Part A - Integration of navigational information**

##### **5 Requirements**

- 5.1 General requirements
- 5.2 Interfacing and Data exchange
- 5.3 Accuracy
- 5.4 Validity, plausibility, latency
- 5.5 Consistent common reference system
- 5.6 Integrity monitoring
- 5.7 Marking of invalid information
- 5.8 Hierarchy, handling of multiple sources
- 5.9 Failure analysis (information/data failure)
- 5.10 Back-up and fallback arrangement (information/data)
- 5.11 Interfacing with alarm management system

#### **Part B - Task related requirements for Integrated Navigational Systems**

##### **6 Operational requirements**

- 6.1 General
- 6.2 Requirements for different levels of integration depending on task of INS
- 6.3 Situation awareness
- 6.4 Traffic situation awareness
- 6.5 Operational mode awareness
- 6.6 Abnormal conditions
- 6.7 Emergency conditions

##### **7 Compliance with SOLAS**

- 7.1 Compliance with SOLAS regulation V/15

**8 Configuration of INS**

**9 Functional requirements for displays of INS**

- 9.1 Collision avoidance
- 9.2 Route planning and route monitoring
- 9.3 Conning information
- 9.4 User selected presentation

**10 Automatic control systems**

- 10.1 General
- 10.2 Heading control system
- 10.3 Track control system

**11 Back up and fallback arrangement**

**12 Technical requirements**

- 12.1 General
- 12.2 Requirements for hardware and/or processors
- 12.3 Requirements for power supply
- 12.4 Power interruption and shut down
- 12.5 I/O and communication hardware
- 12.6 Communication protocols
- 12.7 Redundancies
- 12.8 Failure analysis (hardware and system functions)
- 12.9 Back up and fallback arrangement
- 12.10 Design and installation

**Part C - Alarm management system**

**Part D - Documentation requirements**

\*\*\*



## ANNEX 8

## DRAFT PROPOSED AMENDMENTS TO THE DSC CODE

Paragraph	Reference	Proposed amendment
13.2.	MSC/Circ.1057	<p>Renumber existing text as 13.2.1 and add new paragraph 13.2.2. as follows:</p> <p><i>“The navigational equipment and its installation should be to the satisfaction of the Administration. The Administration should determine to what extent the navigational equipment provisions of this chapter do not apply to craft below 150 gross tonnage.”</i></p> <p>(2000 HSC Code, paragraph 13.1.2)</p>
13.10	MSC/Circ.1057	<p>Insert a new paragraph 13.10 headed <b>“Automatic identification system (AIS)”</b></p> <p><i>1 Craft should be provided with an automatic identification system (AIS) from [1 January/July 2008].</i></p> <p><i>2 AIS should:</i></p> <p><i>.1 provide automatically to appropriately equipped shore stations, other vessels and aircraft information, including the craft’s identity, type, position, course, speed, navigational status and other safety-related information;</i></p> <p><i>.2 receive automatically such information from similarly fitted vessels;</i></p> <p><i>.3 monitor and track vessels; and</i></p> <p><i>.4 exchange data with shore based facilities.</i></p>

		<p>3     <i>The requirements of .2 should not apply where international agreements, rules or standards provide for the protection of navigational information.</i></p> <p>4     <i>AIS should be operated taking into account the guidelines adopted by the Organization* .”</i></p> <p><i>* Refer to Guidelines for the Onboard Operational Use of Shipborne Automatic Identification Systems (AIS) adopted by the Organization by resolution A.917(22), as amended by resolution A.956(23).</i></p> <p>(2000 HSC Code, paragraph 13.15.2, as amended by resolution MSC.119(74))</p>
13.11	MSC/Circ.1057	<p>Insert a new paragraph 13.11 headed <b>“Voyage data recorders (VDR)”</b>**</p> <p>1     <i>To assist in casualty investigations, passenger craft should be fitted with a voyage data recorder (VDR) as follows:</i></p> <p>    .1     <i>ro-ro passenger craft, not later than the first survey after 1 January 2003;</i></p> <p>    .2     <i>passenger craft other than ro-ro passenger craft, not later than 1 January 2004.</i></p> <p>2     <i>The Administration may exempt passenger craft, other than ro-ro passenger craft, from being fitted with a VDR where it can be demonstrated that interfacing a VDR with the existing equipment on the craft is unreasonable and impracticable.</i></p> <p>3     <i>The voyage data recorder system, including all sensors, should be subjected to an annual performance test. The test should be conducted by an approved testing or servicing facility to verify the accuracy, duration and recoverability of the recorded data. In addition, tests and inspections should be conducted to determine the serviceability of all protective enclosures and devices fitted to aid location. A copy of the certificate of compliance issued by the testing facility, stating the date of compliance and the applicable performance standards, should be retained on board the craft.”</i></p> <p><i>** Refer to Recommendation and Performance Standards for voyage data recorders (VDRs) adopted by the Organization by resolution A.861(20).</i></p> <p>(2000 HSC Code, paragraph 13.16.2 as amended by resolution MSC.119(74))</p>

13.12	MSC/Circ.1057	<p>Insert a new paragraph 13.12 headed “<i>Nautical Charts and Publications</i>”</p> <p><i>1 Craft should be provided with nautical charts and nautical publications to plan and display the craft’s route for the intended voyage and to plot and monitor positions throughout the voyage. An electronic display and information system (ECDIS) may be accepted as meeting the chart carriage requirements of this paragraph.</i></p> <p><i>2 Backup arrangements should be provided to meet the functional requirements of .1, if this function is partly or fully fulfilled by electronic means.***”</i></p> <p>*** <i>An appropriate folio of paper nautical charts may be used as a backup arrangement for ECDIS. Other back-up arrangements for ECDIS are acceptable (see appendix 6 to resolution A.817(19), as amended).</i></p> <p>(2000 HSC Code, paragraph 13.8)</p>
-------	---------------	---

\*\*\*



## ANNEX 9

**DRAFT RESOLUTION MSC.[...](81)  
(adopted on ...May 2006)****ADOPTION OF AMENDMENTS TO THE INTERNATIONAL CODE OF SAFETY  
FOR HIGH-SPEED CRAFT, 2000 (2000 HSC CODE), AS AMENDED**

THE MARITIME SAFETY COMMITTEE,

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

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

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

1. ADOPTS amendments to the International Code of Safety for High-Speed Craft, 2000 (2000 HSC Code), the text of which is set out in the Annex to the present resolution;
2. DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the amendments shall be deemed to have been accepted on [1 January 2007], unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet, have notified their objections to the amendments;
3. INVITES Contracting Governments to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on [1 July 2007] upon their acceptance in accordance with paragraph 2 above;
4. REQUESTS the Secretary-General, in conformity with article VIII (b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the Annex to all Contracting Governments to the Convention; and
5. FURTHER REQUESTS the Secretary-General to transmit copies of this resolution and its Annex to Members of the Organization, which are not Contracting Governments to the Convention.

ANNEX

**PROPOSED DRAFT AMENDMENTS TO THE INTERNATIONAL CODE OF  
SAFETY FOR HIGH-SPEED CRAFT 2000, AS AMENDED**

**CHAPTER 13**

*Shipborne navigational systems and equipment and voyage data recorders*

**[Regulation 13.8 – Nautical charts and nautical publications**

- 1 Add a new paragraph 13.8.2 as follows:
  - 13.8.2 High-Speed craft shall be fitted with an Electronic Chart Display and Information System (ECDIS), as follows:
    - .1 craft constructed on or after [1 July 2008];
    - .2 craft constructed before [1 July 2008] ; not later than [1 July 2010].
- 2 Renumber the existing paragraph 13.8.2 as 13.8.3.]

\*\*\*

## ANNEX 10

**DRAFT SPECIFICATION OF A WORLD-WIDE INTERNET BASED CHART CATALOGUE PROVIDED BY IHO ON BEHALF OF ITS MEMBER STATES**

The chart catalogue is divided into three sub-catalogues of the following categories:

- ENC coverage
- RNC coverage
- Paper chart coverage

The content of all three sub-catalogues can either be presented in graphical and textual form.

All information included have to be provided by the MSAs of the IMO Member States in co-operation with their national Hydrographic Offices.

This catalogue is not intended to be as comprehensive as the individual chart catalogues of the those of the Hydrographic Offices of the individual IMO Member States. Therefore a list of existing internet links to homepages of the individual Hydrographic Offices is also part of this IHO chart catalogue.

Proposed attributes to be provided for sub-catalogue entries:

## ENC sub-catalogue

<ul style="list-style-type: none"> <li>• Issuing authority (possibly on behalf of another Member State)</li> <li>• Source producing authority</li> <li>• Data format (S57 Edition 3.1)</li> <li>• State of the chart (Current, obsolete, under construction, planned)</li> <li>• Distribution method (e.g. issuing HO, RENC, free download)</li> <li>• Allowance of SENC distribution: Yes/No</li> </ul>	<ul style="list-style-type: none"> <li>• ENC cell identifier</li> <li>• Compilation scale / usage band</li> <li>• Co-ordinates of edges</li> <li>• Edition date</li> <li>• [no data area included?]</li> </ul>
--	--

Details like reference to geodetic datum are not needed to note for any ENC sub-catalogue entry because they are already standardized for ENCs in general.

RNC catalogue [full coverage or as supplement to the existing ENC coverage?]

<ul style="list-style-type: none"> <li>• Issuing authority (possibly on behalf of another Member State)</li> <li>• Source producing authority</li> <li>• State of the chart (Current, obsolete, under construction, planned)</li> <li>• Data format (e.g. HCRF)</li> <li>• Update frequency</li> <li>• Distribution method (e.g. chart supplier)</li> </ul>	<ul style="list-style-type: none"> <li>• National Chart Number</li> <li>• International Chart Number</li> <li>• Nationality of the base chart/Language</li> <li>• Title in national language</li> <li>• Title in English language</li> <li>• Chart style (INT chart or national)</li> <li>• Co-ordinates of edges</li> <li>• Scale of main charts</li> <li>• Number of plans included</li> <li>• Titles of plans included</li> <li>• Date of first edition</li> <li>• Date of latest edition</li> <li>• Issue year</li> <li>• Geodetic datum</li> <li>• Vertical datum</li> <li>• Projection</li> <li>• Year of survey</li> <li>• Method of survey</li> </ul>
---	---

Paper chart catalogue [full set of all charts offered by any IMO Member State, or national coverage including coverage produced on behalf of other Member States only?]

<ul style="list-style-type: none"> <li>• Issuing authority (possibly on behalf of another Member State)</li> <li>• Source producing authority</li> <li>• State of the chart (Current, obsolete, under construction, planned)</li> <li>• Update frequency</li> <li>• Distribution method (e.g. chart supplier)</li> </ul>	<ul style="list-style-type: none"> <li>• National Chart Number</li> <li>• International Chart Number</li> <li>• Nationality of the base chart/Language</li> <li>• Title in national language</li> <li>• Title in English language</li> <li>• Chart style (INT chart or national)</li> <li>• Co-ordinates of edges</li> <li>• Scale of main charts</li> <li>• Number of plans included</li> <li>• Titles of plans included</li> <li>• Date of first edition</li> <li>• Date of latest edition</li> <li>• Issue year</li> <li>• Geodetic datum</li> <li>• Vertical datum</li> <li>• Projection</li> <li>• Year of survey</li> <li>• Class of survey (S-44)</li> </ul>
<ul style="list-style-type: none"> <li>• Part of ECDIS backup if done by means of paper charts: Yes/No</li> <li>• Part of folio to be used in conjunction with RNCs if there are no ENCs: Yes/No</li> </ul>	

\*\*\*

**ANNEX 11****TERMS OF REFERENCE OF THE  
CORRESPONDENCE GROUP ON EVALUATION OF THE  
USE OF ECDIS AND ENC DEVELOPMENT**

Taking into account resolution A.817(19) as amended by resolutions MSC.64(70) and MSC.86(70), the decisions of NAV 51 and the decisions of the MSC to include amendments to the ECDIS performance standards in the work programme of the Sub-Committee and provisional agenda for NAV 52 (NAV 51/2/2, annex 2), provide comments and give preliminary consideration to:

- .1 the proposed amendments to the ECDIS performance standards as contained in documents MSC 80/21/2 (Greece and IHO), NAV 51/6/2 (Russian Federation), NAV 51/6/3 (Japan) and NAV 51/6 (Report of Correspondence Group);
- .2 prepare a draft consolidated text of revised performance standards for ECDIS;
- .3 consider possible implications of the proposed amendments for IMO performance standards, guidance and guidelines on ECDIS;
- .4 the preliminary draft specifications of the proposed chart catalogue given at NAV 51/WP.4, annex 3; and

prepare a report for submission to NAV 52.

\*\*\*



**ANNEX 12****DRAFT ASSEMBLY RESOLUTION A...(25)  
(adopted on [November 2007])****GUIDELINES ON VOYAGE PLANNING FOR PASSENGER SHIPS  
OPERATING IN REMOTE AREAS**

THE ASSEMBLY,

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

RECALLING ALSO regulation 6 of Chapter V of the International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended, on the Ice patrol service, including the Appendix to chapter V on Rules for the management, operation and financing of the North Atlantic Ice Patrol,

RECALLING FURTHER resolution A.893(21) by on Guidelines for voyage planning,

NOTING that the Maritime Safety Committee, at its seventy-sixth session (2 to 13 December 2002), and the Marine Environment Protection Committee, at its forty-eighth session (7 to 11 October 2002), approved Guidelines for ships operating in Arctic ice-covered waters, and issued as MSC/Circ.1056 and MEPC/Circ.399,

RECOGNIZING the need to develop guidelines which supplement resolution A.893(21) particularly for passenger ships operating in remote areas in order to prevent incidents of groundings and collision, and improve safety of life in general,

HAVING CONSIDERED the recommendation made by the Sub-Committee on Safety of Navigation at its fifty-first session and endorsed by the Maritime Safety Committee at its [eighty-first session]:

1. ADOPTS the Guidelines on voyage planning for passenger ships in remote areas set out in the Annex to the present resolution;
2. INVITES Governments to bring the annexed Guidelines to the attention of masters of vessels flying their countries' flag, shipowners, ship operators, shipping companies, maritime pilots, training institutions, tour operators, ice patrol and ice breaking services and all other parties concerned, for information and action as appropriate; and
3. REQUESTS the Maritime Safety Committee to keep the said Guidelines under review and to amend them as appropriate.

## ANNEX

### **DRAFT GUIDELINES ON VOYAGE PLANNING FOR PASSENGER SHIPS OPERATING IN REMOTE AREAS**

#### **1 Introduction**

1.1 The growing popularity of ocean travel for passengers and the desire for exotic destinations, has led to increasing numbers of passenger ships operating in remote areas. When developing a plan for voyages to remote areas, special consideration should be given to the environmental nature of the area of operation, limited resources, and navigational information.

1.2 Passenger ships operating in remote Arctic ice-covered waters should also refer to MSC/Circ.1056 (MEPC/Circ.399) for recommended construction provisions, equipment recommendations, and operational guidelines.

1.3 Guidance on voyage planning is given in resolution A.893(21). In addition to the guidance in resolution A.893(21), passenger ships operating in remote areas should include the following additional factors in their voyage planning.

#### **2 Appraisal**

2.1 The detailed voyage and passage plan should include the following factors:

- .1 the source, age, and the quality of the hydrographic data on which the charts to be used are based;
- .2 limitations of available MSI data and Search and Rescue resources;
- .3 availability or lack of aids to navigation; and
- .4 places of refuge.

2.2 In addition, the detailed voyage and passage plan for ships operating in Arctic or Antarctic waters should include the following factors:

- .1 knowledge of ice and ice formations, in order to be able to navigate in it, and how environmental conditions such as current, wind, calm weather, fog and different seasons affect the ice and navigation in ice;
- .2 current information on the extent and type of ice and icebergs in the vicinity of the intended route;
- .3 statistical information on ice from former years;
- .4 operational limitations for operating in ice-covered waters; and
- .5 availability and use of ice navigators.

### **3 Planning**

3.1 The detailed voyage and passage plan should include the following factors:

- .1 safe areas and no-go areas;
- .2 surveyed marine corridors, if available; and
- .3 contingency plans for emergencies in view of limited support available for assistance in remote areas.

3.2 In addition, the detailed voyage and passage plan for ships operating in Arctic or Antarctic waters should include the following factors:

- .1 conditions when it is not safe to enter areas with ice or icebergs because of darkness, swell, fog and pressure ice;
- .2 safe distance to icebergs; and
- .3 presence of ice and icebergs, and safe speed in such areas.

### **4 Execution**

4.1 The detailed voyage and passage plan should include the following factors:

- .1 reporting changes to a previously advised voyage and passage plan, to the relevant authorities.

4.2 In addition, the detailed voyage and passage plan for ships operating in Arctic or Antarctic waters should include the following factors:

- .1 existing ice conditions; and
- .2 measures before entering waters where ice may be present. For example, abandon ship drill and preparation of special equipment<sup>1</sup>.

\*\*\*

---

<sup>1</sup> See for example MSC/Circ.1056: Guidelines for ships operating in Arctic ice covered waters.



**ANNEX 13****DRAFT PERFORMANCE STANDARDS  
FOR ESSENTIAL SYSTEMS AND EQUIPMENT ON PASSENGER SHIPS FOR SAFE  
RETURN TO PORT AFTER A CASUALTY AND FOR THREE HOURS TIME TO  
REMAIN HABITABLE AFTER A CASUALTY**

These performance standards provide additional guidance for the uniform implementation of SOLAS regulations II-2/21.1 and II-2/21.2, which requires that, after a fire or flooding casualty, basic services be provided to all persons on board and that certain essential systems and equipment remain operational for safe return to the nearest port.

**Steering systems and steering-control systems**

Steering systems and steering-control systems should be capable of manoeuvring the ship. A means of communication should be provided between the navigating bridge and the steering gear compartment.

**Navigation systems**

Equipment essential for navigation, position fixing and detection of risk of collision should also be available. The vessel should be capable of displaying the proper light configuration in compliance with the International Regulations for Preventing Collisions at Sea.

**Internal communications systems (bridge to engineering spaces)**

A means should be provided for communicating orders from the navigation position to the position in the machinery space or the control room from which the speed and direction of the thrust of the propulsion are normally controlled.

These performance standards provide additional guidance for the uniform implementation of SOLAS regulation II-2/21.3, which requires that, after a fire or flooding casualty, certain essential systems and equipment remain operational to support the safe and orderly abandonment of the ship.

**[Steering systems and steering-control systems**

Steering systems and steering-control systems shall be capable of manoeuvring the ship to facilitate abandonment.]

**Internal communications systems (bridge to engineering spaces)**

A means should be provided for communicating orders from the navigation position to the position in the machinery space or the control room from which the speed and direction of the thrust of the propellers are normally controlled.

\*\*\*



**ANNEX 14****DRAFT JUSTIFICATION FOR A PROPOSED NEW WORK PROGRAMME ITEM ON  
PERFORMANCE STANDARDS FOR SHIPBORNE GALILEO  
RECEIVER EQUIPMENT****1. Scope of the proposal**

Develop performance standards for Galileo satellite navigation system receiver equipment as a future part of the World-Wide Radionavigation System.

**2. Compelling Need**

A new work item is necessary to enable the Sub-Committee to prepare performance standards for Galileo receiver equipment. The system is currently being developed by the European Commission and the European Space Agency. The first Galileo test satellite will be launched at the end of 2005. The system will be gradually deployed with the initial operational capability in 2008.

Similarly to GPS and GLONASS in the past, Galileo will be offered for the use of the international maritime community as an element of the World-Wide Radionavigation System (WWRNS).

The capacity to use the system is therefore dependent upon the availability of IMO performance standards.

**3. Analysis of the issues involved, having regard to the costs to the maritime industry and global legislative and administrative burdens**

The purpose of this effort is to establish performance standards for Galileo receiver equipment based on the existing IMO performance standards for GPS and GLONASS receiver equipment which are of a similar nature (global navigation satellite systems). This will provide an additional option for the maritime community. The administrative burdens to the Organization and to Member States are anticipated to be minimal.

**4. Benefits**

The Galileo satellite navigation system will provide a global radio-navigation service meeting all the requirements for oceanic, coastal, port approach and restricted waters operations, as established by resolutions A.915(22) and A.953(23). This includes, when using the Galileo Safety of Life service, the real-time provision of integrity information that will issue timely warnings in case of system failure or excessive positioning error.

The service is provided in several frequency bands allocated by ITU (RNSS allocations in ARNS bands) and offers a significantly improved robustness against on-board and ground interference.

The services offered can be further improved by jointly using a combination of Galileo and the other existing global navigation satellite systems GPS and GLONASS.

**5. Priority and target completion date**

This issue should have a high priority since it would be desirable that Galileo receiving equipment can be available as soon as the service becomes operational in 2008.

Based on the work already performed by the NAV Sub-Committee on this issue (at annex), it is expected that, as a minimum, one session will be needed to address this matter.

Performance standards will be needed in 2006 in order to allow industry sufficient time to develop equipment.

**6. Specific indication of the action required**

In accordance with section 1 above.

**7. Remarks on the criteria for general acceptance**

- .1 Is the subject of the proposal within the scope of IMO's objectives ? Yes.
- .2 Do adequate industry standards exist? Not yet. Development of IMO performance standards proposed is a pre-requisite for the development of such industry standards.
- .3 Do the benefits justify the proposed action? Yes.

**8. Identification of which subsidiary bodies are essential to complete the work**

The work should be able to be accomplished by the Sub-Committee on the Safety of Navigation exclusively.

## ANNEX

### DRAFT PERFORMANCE STANDARDS FOR SHIPBORNE GALILEO RECEIVER EQUIPMENT

#### 1 INTRODUCTION

- 1.1 Galileo is the European satellite navigation system. Galileo is designed as a wholly civil system, operated under public control. Galileo comprises 30 medium earth orbit (MEO) satellites in 3 circular orbits. Each orbit has an inclination of 56° and contains 9 operational satellites plus one operational spare. This geometry ensures that a minimum of 6 satellites are in view to users world-wide with a position dilution of precision (PDOP)  $\leq 3.5$ .
- 1.2 Galileo transmits 10 navigation signals and 1 search and rescue (SAR) signal. The SAR signal is broadcast in one of the frequency bands reserved for the emergency services (1544-1545 MHz) whereas the 10 navigation signals are provided in the radio-navigation satellite service (RNSS) allocated bands:
- 4 signals occupy the frequency range 1164-1215 MHz (E5a-E5b)
  - 3 signals occupy the frequency range 1260-1300 MHz (E6)
  - 3 signals occupy the frequency range 1559-1591 MHz (E2, L1, E1).

Each frequency carries two signals; the first is a tracking signal – the so-called pilot signal – that contains no data but increases the tracking robustness at the receiver whereas the other carries a navigation data message.

Galileo provides two different services of use for the maritime community.

- 1.3 The Galileo Open Service provides positioning, navigation and timing services, free of direct user charges. The Open Service can be used on one (L1), two (L1 and E5a or L1 and E5b) or three (L1, E5a and E5b) frequencies.
- 1.4 The Galileo Safety of Life Service can be used on one (L1 **or** E5b) or two (L1 and E5b) frequencies<sup>1</sup>. Each of the L1 and E5b frequencies carries a navigation data message that includes integrity information. The E5a frequency does not include integrity data.
- 1.5 Galileo receiver equipment intended for navigation purposes on ships of speeds not exceeding 70 knots, in addition to the general requirements specified in resolution A.694(17)<sup>2</sup>, should comply with the following minimum performance requirements.
- 1.6 These standards cover the basic requirements of position fixing, determination of course over ground (COG), speed over ground (SOG) and timing, either for navigation purposes or as input to other functions. The standards do not cover the other computational facilities which may be in the equipment nor cover the requirements for any other systems that may take input from the Galileo receiver.

---

<sup>1</sup> The integrity parameters broadcast by the Galileo Safety Of Life service will be unencrypted and therefore fully accessible. Service Guarantees and Authentication services can be made available, at a charge, through contractual means if desired.

<sup>2</sup> Refer to publication IEC 60945.

## 2 GALILEO RECEIVER EQUIPMENT

2.1 The words “*Galileo receiver equipment*” as used in these performance standards include all the components and units necessary for the system properly to perform its intended functions. The Galileo receiver equipment should include the following minimum facilities:

- .1 antenna capable of receiving Galileo signals;
- .2 Galileo receiver and processor;
- .3 means of accessing the computed latitude/longitude position;
- .4 data control and interface; and
- .5 position display and, if required, other forms of output.

2.2 The antenna design should be suitable for fitting at a position on the ship which ensures a clear view of the satellite constellation, taking into consideration any obstructions that might exist on the ship.

## 3 PERFORMANCE STANDARDS FOR GALILEO RECEIVER EQUIPMENT

The Galileo receiver equipment should:

- .1 be capable of receiving and processing the Galileo positioning and velocity, and timing signals on:
  - i) for a single frequency receiver, the L1 frequency alone. The receiver should use the ionospheric model broadcast to the receiver by the constellation to generate ionospheric corrections;
  - ii) for a dual frequency receiver, **either** the L1 and E5b frequencies **or** the L1 and E5a frequencies. The receiver should use dual frequency processing to generate ionospheric corrections;
- .2 provide position information in latitude and longitude in degrees, minutes and thousandths of minutes<sup>3</sup>;
- .3 provide time referenced to universal time coordinated UTC (BIPM);
- .4 be provided with at least two outputs from which position information, UTC, course over ground (COG), speed over ground (SOG) and alarms can be supplied to other equipment. The output of position information should be based on the WGS84 datum and should be in accordance with international standards<sup>4</sup>. The output of UTC, course over ground (COG), speed over ground (SOG) and alarms should be consistent with the requirements of 3.18 and 3.19;

---

<sup>3</sup> Galileo uses Galileo Terrestrial Frame System (GTRF) datum which is a realization of the International Terrestrial Frame Reference (ITRF) system and differs from WGS 84 by less than 5cm worldwide.

<sup>4</sup> IEC Publication 61162.

- .5 have static accuracy such that the position of the antenna is determined to within:
  - i) 15 m horizontal (95%) and 35 m vertical (95%) for single frequency operations on the L1 frequency;
  - ii) 10 m horizontal (95%) and 10 m vertical (95%) for dual frequency operations on L1 and E5a or L1 and E5b frequencies<sup>5</sup>;
- .6 have dynamic accuracy equivalent to the static accuracy specified in .5 above under the sea states and motion experienced in ships<sup>6</sup>;
- .7 have position resolution equal or better than 0.001 minutes of latitude and longitude;
- .8 have timing accuracy such that time is determined within 50ns of UTC;
- .9 have velocity accuracy of better than 0.5 m.s<sup>-1</sup>;
- .10 be capable of selecting automatically the appropriate satellite-transmitted signals to determine the ship's position and velocity, and time with the required accuracy and update rate;
- .11 be capable of acquiring satellite signals with input signals having carrier levels in the range of -128dBm to -118dBm. Once the satellite signals have been acquired, the equipment should continue to operate satisfactorily with satellite signals having carrier levels down to -131dBm;
- .12 be capable of operating satisfactorily under normal interference conditions consistent with the requirements of resolution A.694(17);
- .13 be capable of acquiring position, velocity and time to the required accuracy within 5 minutes when there is no valid almanac data (cold start);
- .14 be capable of acquiring position, velocity and time to the required accuracy within 1 minute when there is valid almanac data (warm start);
- .15 be capable of re-acquiring position, velocity and time to the required accuracy within 1 minute when there has been a service interruption of 60 s or less;

---

<sup>5</sup> The minimum accuracy requirements specified for dual frequency processing are based on the performance requirements established by the Organization in resolution A.915(22) and resolution A.953(23) for navigation in harbour entrances, harbour approaches and coastal waters.

The Galileo satellite navigation system will be able to provide better accuracy (4m horizontal 95% and 8 m vertical 95%).

<sup>6</sup> Refer to resolution A.694(17), Publications IEC 6721-3-6 and IEC 60945.

- .16 generate and output to a display and digital interface<sup>7</sup> a new position solution at least once every 1 s for conventional craft and at least once every 0.5 s for high-speed craft;
- .17 the COG, SOG and UTC outputs should have a validity mark aligned with that on the position output. The accuracy requirements for COG and SOG should not be inferior to the relevant performance standards for heading<sup>8</sup> and speed and distance measuring equipment (SDME)<sup>9</sup> and the accuracy should be obtained under the various dynamic conditions that could be experienced onboard ships;
- .18 at least one normally closed contact should be provided for indicating failure of the Galileo receiver equipment; and
- .19 the Galileo receiver equipment should have a bidirectional interface to facilitate communication so that alarms can be transferred to external systems and so that audible alarms from the Galileo receiver can be muted from external systems; the interface should comply with the relevant international standards.<sup>10</sup>

#### **4 INTEGRITY CHECKING, FAILURE WARNINGS AND STATUS INDICATIONS**

- 4.1 The Galileo receiver equipment should also indicate whether the performance of Galileo is outside the bounds of requirements for general navigation in the ocean, coastal, port approach and restricted waters, and inland waterway phases of the voyage as specified in either resolution A.953(23) or Appendix 2 to resolution A.915(22) and any subsequent amendments as appropriate. The Galileo receiver equipment should as a minimum:
  - .1 provide a warning within 5 s if a new position based on the information provided by the Galileo constellation has not been calculated for more than 1 s for conventional craft and 0.5 s for high-speed craft;
  - .2 provide a warning of loss of position;
  - .3 use receiver autonomous integrity monitoring (RAIM) to provide integrity performance appropriate to the operation being undertaken;
  - .4 for receivers having the capability to process the Galileo Safety of Life Service, integrity monitoring and alerting algorithms should be based on a suitable combination of the Galileo integrity message and receiver autonomous integrity monitoring (RAIM). The receiver should provide an alarm within 10 s (TTA) of the start of an event if an alert limit of 25 m (HAL) is exceeded for a period of at least 3 s. The probability of detection of the event should be better than 99.999% over a 3-hour period (integrity risk  $\leq 10^{-5}/3$  hours).

---

<sup>7</sup> Conforming to the IEC 61162 series.

<sup>8</sup> Resolution A.424 (XI) for conventional craft and resolution A.821(19) for high-speed craft.

<sup>9</sup> Resolution A.824(19)

<sup>10</sup> IEC Publication 61162

Under such conditions the last known position and the time of last valid fix, with the explicit indication of the state so that no ambiguity can exist, should be output until normal operation is resumed; and

- .5 provide a self-test function.

## **5 PROTECTION**

Precautions should be taken to ensure that no permanent damage can result from an accidental short circuit or grounding of the antenna or any of its input or output connections or any of the Galileo receiver equipment inputs or outputs for a duration of 5 minutes or less.

\*\*\*



## ANNEX 15

## DRAFT RESOLUTION MSC.[...](81)

**ADOPTION OF AMENDMENTS TO PERFORMANCE STANDARDS FOR  
SHIPBORNE VOYAGE DATA RECORDERS (VDRS) (RESOLUTION A.861(20))  
AND SIMPLIFIED VOYAGE DATA RECORDERS (S-VDRS)  
(RESOLUTION MSC.163(78))**

THE MARITIME SAFETY COMMITTEE,

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

RECALLING ALSO resolution A.886(21), by which the Assembly resolved that the functions of adopting performance standards for radio and navigational equipment, as well as amendments thereto, shall be performed by the Maritime Safety Committee on behalf of the Organization,

HAVING CONSIDERED resolution A.861(20) on Performance standards for shipborne voyage data recorders (VDRs) and resolution MSC.163(78) on Performance standards for shipborne simplified voyage data recorders (S-VDRs) and reviewed requirements for extracting stored data from VDRs and S-VDRs,

RECOGNIZING that, after an accident, there is a need for the investigators to be able to download the stored data and playback the information from VDRs/S-VDRs without delay,

HAVING CONSIDERED the recommendation made by the Sub-Committee on Safety of Navigation at its fifty-first session,

1. ADOPTS the amendments to the Recommendations on Performance Standards to Shipborne VDRs and S-VDRs, set out in Annexes 1 and 2, respectively, to the present resolution;
2. RECOMMENDS Governments to ensure that VDRs and S-VDRs:
  - (a) if fitted before [1 June 2008], conform to performance standards not inferior to those specified in the Annexes to resolutions A.861(20) and MSC.163(78), respectively; and
  - (b) if fitted on or after [1 June 2008], conform additionally to the amendments to performance standards not inferior to those specified in Annexes 1 and 2 to the present resolution.

ANNEX 1

**DRAFT AMENDMENTS TO THE RECOMMENDATION ON PERFORMANCE  
STANDARDS FOR SHIPBORNE VOYAGE DATA RECORDERS (VDRs)  
(Resolution A.861(20))**

**ANNEX TO RESOLUTION A.861(20)**

Section 8 is added, as follows:

**“8 DOWNLOAD AND PLAYBACK EQUIPMENT FOR INVESTIGATION  
AUTHORITIES**

**8.1 Data output interface**

The VDR should provide an interface for downloading the stored data and playback the information to an external computer. The interface should be compatible with an internationally recognized format, such as Ethernet, USB, FireWire, or equivalent.

**8.2 Software for data downloading and playback**

8.2.1 A copy of the software programme providing the capability to download the stored data and playback the information onto a connected external laptop computer and for the playback of the data should be provided for each VDR installation.

8.2.2 The software should be compatible with an operating system available with commercial-off-the-shelf laptop computers and provided on a portable storage device such as a CD-ROM, DVD, USB-memory stick, etc.

8.2.3 Instructions for executing the software and for connecting the external laptop computer to the VDR should be provided.

8.2.4 The portable storage device containing the software, the instructions and any special (not commercial-off-the-shelf) parts necessary for the physical connection of the external laptop computer, should be stored within the main unit of the VDR.

8.2.5 Where non-standard or proprietary formats are used for storing the data in the VDR, the software for converting the stored data into open industry standard formats should be provided on the portable storage device or resident in the VDR.”

ANNEX 2

**DRAFT AMENDMENTS TO THE RECOMMENDATION ON PERFORMANCE  
STANDARDS FOR SHIPBORNE SIMPLIFIED VOYAGE DATA RECORDERS  
(S-VDRs) (Resolution MSC.163(78))**

**ANNEX TO RESOLUTION MSC.163(78)**

Section 8 is added, as follows:

**“8 DOWNLOAD AND PLAYBACK EQUIPMENT FOR INVESTIGATION  
AUTHORITIES**

**8.1 Data output interface**

The S-VDR should provide an interface for downloading the stored data and playback the information to an external computer. The interface should be compatible with an internationally recognized format, such as Ethernet, USB, FireWire, or equivalent.

**8.2 Software for data downloading and playback**

8.2.1 A copy of the software programme providing the capability to download the stored data and playback the information onto a connected external laptop computer and for the playback of the data should be provided for each S-VDR installation.

8.2.2 The software should be compatible with an operating system available with commercial-off-the-shelf laptop computers and provided on a portable storage device such as a CD-ROM, DVD, USB-memory stick, etc.

8.2.3 Instructions for executing the software and for connecting the external laptop computer to the S-VDR should be provided.

8.2.4 The portable storage device containing the software, the instructions and any special (not commercial-off-the-shelf) parts necessary for the physical connection of the external laptop computer, should be stored within the main unit of the S-VDR.

8.2.5 Where non-standard or proprietary formats are used for storing the data in the S-VDR, the software for converting the stored data into open industry standard formats should be provided on the portable storage device or resident in the S-VDR.”

\*\*\*



## ANNEX 16

## REVISED WORK PROGRAMME OF THE SUB-COMMITTEE

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
1	<b>Routeing of ships, ship reporting and related matters</b>	Continuous	MSC 72/23, paragraphs 10.69 to 10.71, 20.41 and 20.42; NAV 51/19, section 3
2	<b>Casualty analysis (co-ordinated by FSI)</b>	Continuous	MSC 70/23, paragraphs 9.17 and 20.4; NAV 51/19, section 13
3	<b>Consideration of IACS unified interpretations</b>	Continuous	MSC 78/26, paragraph 22.12; NAV 51/19, section 14
H.1	<b>World-wide radionavigation system (WWRNS)</b>	<del>2005</del> [2008]	MSC 75/24, paragraph 22.37
	.1 new developments in the field of GNSS, especially Galileo	<del>2005</del> [2008]	NAV 50/19, paragraphs 13.1 to 13.3
	[.2 performance standards for shipborne Galileo receiver equipment	[2006]	NAV 51/19, paragraphs 12.8 to 12.9 and paragraph 16.3.3]
	<del>2.3</del> review and amendment of IMO policy for GNSS (resolution A.915(22))	<del>2005</del> [2008]	NAV 48/19, paragraph 16.3.2

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

2 Items printed in bold letters have been selected for the provisional agenda for NAV 52.

**Draft Revised Work Programme of the Sub-Committee (continued)**

	<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
3.4 recognition of radionavigation systems as components of the WWRNS (resolution A.953(23))	2005 [2008]	NAV 48/19, paragraph 16.3.3
<del>H.2 Passenger ship safety: effective voyage planning for passenger ships</del>	2006	<del>MSC 73/21, paragraph 18.23; MSC 74/24, paragraph 21.4; MSC 79/23, paragraph 4.12 NAV 51/19, paragraph 10.21</del>
<del>H.3 Review of the OSV Guidelines (co-ordinated by SLF)</del>	2005	<del>MSC 75/24, paragraph 22.4; MSC 78/26, paragraph 12.15; NAV 51/19, paragraph 7.4</del>
<del>H.4 Review of the 2000 HSC Code and amendments to the DSC Code and the 1994 HSC Code (co-ordinated by DE)</del>	2005	<del>MSC 75/24, paragraphs 12.22 and 2.8; MSC 76/23, paragraphs 8.19 and 20.4; NAV 51/19, paragraph 5.8</del>
<del>H.5 Measures to enhance maritime security</del>	2005	<del>MSC 75/24, paragraph 22.9; NAV 51/19, paragraph 11.5</del>
H.62 ITU matters, including Radiocommunication ITU-R Study Group 8 matters	2006	MSC 69/22, paragraphs 5.69 and 5.70; NAV 51/19, section 9

**Draft Revised Work Programme of the Sub-Committee (continued)**

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
H.7	<del>Review of the SPS Code (co-ordinated by DE)</del>	2006	<del>MSC 78/26, paragraph 24.9; NAV 51/19, paragraph 8.6</del>
H.83	<b>Revision of the performance standards for INS and IBS</b>	2006	MSC 78/26, paragraph 24.30; NAV 51/19, section 4
H.94	<b>Evaluation of the use of ECDIS and ENC development</b>	2006	MSC 78/26, paragraph 24.33; NAV 51/9, section 6
H.10	<del>Revision of the performance standards for VDRs and S-VDRs</del>	2006	<del>MSC 79/23, paragraph 20.24</del>
H.115	<b>Amendments to the ECDIS performance standards</b>	2 sessions [2007]	MSC 80/24, paragraph 21.22
H.126	<b>Development of guidelines for the installation of shipborne radar equipment</b>	3 sessions [2008]	MSC 80/24, paragraph 21.23
H.137	<b>Amendments to COLREGs Annex I related to colour specification of lights</b>	2 sessions [2007]	MSC 80/24, paragraph 21.24.1
H.148	<b>Development of performance standards for navigation lights, navigation light controllers and associated equipment</b>	2 sessions [2007]	MSC 80/24, paragraph 21.24.2

\*\*\*



**ANNEX 17****PROVISIONAL AGENDA FOR THE FIFTY-SECOND SESSION**

- Opening of the session
- 1 Adoption of the agenda
  - 2 Decisions of other IMO bodies
  - 3 Routing of ships, ship reporting and related matters
  - 4 Revision of the performance standards for INS and IBS
  - 5 Amendments to the ECDIS performance standards
  - 6 Evaluation of the use of ECDIS and ENC development
  - 7 Development of guidelines for the installation of shipborne radar equipment
  - 8 Amendments to COLREGs Annex I related to colour specification of lights
  - 9 ITU matters, including Radiocommunication ITU-R Study Group 8 matters
  - [10 Performance standards for shipborne Galileo receiver equipment]
  - 11 Development of performance standards for navigation lights, navigation light controllers and associated equipment
  - 12 World-wide radionavigation system (WWRNS)
  - 13 Casualty analysis
  - 14 Consideration of IACS unified interpretations
  - 15 Work programme and agenda for NAV 53
  - 16 Election of Chairman and Vice-Chairman for 2007
  - 17 Any other business
  - 18 Report to the Maritime Safety Committee
-