

**Report of the 16th Session of the IALA ANM Committee**

**4 to 8 April 2011**

***Executive Summary***

* 50 members attended this meeting of the ANM Committee, 13 for the first time;
* This was a record attendance for the ANM Committee;
* The Committee considered 52 input papers;
* The Committee produced:
* A draft Guideline on the procedure for the authorisation of AIS AtoN;
* A draft revised Recommendation O-130 on the categorisation and availability objectives for short range AtoN;
* A revised draft Guideline 1078 on the use of AtoN in the design of fairways;
* A draft revised Guideline 1058 on the use of simulation as a tool for waterway design and AtoN planning;
* Proposals for a seminar and a workshop;
* An action plan and timetable for the revision of the NAVGUIDE;
* An information paper requesting the revoking of Recommendation O-133;
* A letter to the Netherlands, responding to its helpful contributions to the revision of Guideline 1058;
* 4 Liaison Notes;
* Finalised the Working groups’ terms of reference.
* Reviewing draft revised Recommendation O-130 led to the conclusion that the current Recommendation adequately addressed the issue of categorisation of synchronised / sequenced lights;
* Changes to the Work Programme were proposed (Annex G).

Table of Contents

[Table of Contents 2](#_Toc290041804)

[Report of the 16th Session of the IALA ANM Committee 5](#_Toc290041805)

[1 General 5](#_Toc290041806)

[1.1 Administrative Announcements 5](#_Toc290041807)

[1.2 Approval of the Agenda 5](#_Toc290041808)

[2 Review of Action Items from ANM15 5](#_Toc290041809)

[2.1 Action Items – IALA Secretariat 6](#_Toc290041810)

[2.2 Action Items – ANM Committee Members 6](#_Toc290041811)

[3 Review of input papers 6](#_Toc290041812)

[4 Reports from other bodies 6](#_Toc290041813)

[4.1 IALA Council 50th session 6](#_Toc290041814)

[4.2 Report of IMO MSC88 6](#_Toc290041815)

[4.3 Report of PAP20 7](#_Toc290041816)

[5 Reports from Rapporteurs 7](#_Toc290041817)

[5.1 Risk Management and Risk Models (M1) 7](#_Toc290041818)

[5.2 IALA Questionnaire (M2) 7](#_Toc290041819)

[5.3 Offshore manmade structures (OREI) (M3) 8](#_Toc290041820)

[5.4 Development of e-Navigation within AtoN Authorities (M4) 8](#_Toc290041821)

[5.5 Development of e-Navigation for AtoN users (M5) 8](#_Toc290041822)

[5.6 Development of mobile marine products for AtoN users (M6) 8](#_Toc290041823)

[6 Presentations 9](#_Toc290041824)

[6.1 Analysis of Maritime Accidents in the Republic of Korea 9](#_Toc290041825)

[6.2 Effects on AtoN of earthquake & tsunami in Japan 9](#_Toc290041826)

[6.3 Floodlighting of lighthouse buildings 9](#_Toc290041827)

[6.4 Buoy stability simulation & Mobile virtual waterway 9](#_Toc290041828)

[7 Establish Working Groups 10](#_Toc290041829)

[8 Working Group 1 – Navigational Requirements (WG1) 10](#_Toc290041830)

[8.1 Produce guidance for Aids to Navigation Authorities on the user requirements and practical applications of e-Navigation, from berth to berth. (Task 1\*) 10](#_Toc290041831)

[8.2 Develop Recommendations on AtoN standards and navigational requirements in risk control measures included in e-Navigation (this would include a revision (or a replacement) of the existing Recommendations and Guideline on risk management (1018) (Task 2\*) 11](#_Toc290041832)

[8.3 Develop guidance on the application of maritime surface picture (e.g. AIS traffic data) for analysis in risk assessment and the provision of Aids to Navigation (Task 3\*) 11](#_Toc290041833)

[8.4 Develop guidance for AtoN Authorities in the use of Virtual Aids to Navigation assessing their use and contribution to safety of navigation (Task 4\*) 11](#_Toc290041834)

[8.5 Consider the IMO Wreck Removal Convention and its implications for AtoN Authorities and States. Develop a Recommendation for IALA Members including guidance on marking ‘floating wreckage’, taking into account existing IALA guidance (Task 5\*) 12](#_Toc290041835)

[8.6 Review IALA Recommendation O-139 on the Marking of Man-made Off-shore structures (Task 12\*) 12](#_Toc290041836)

[8.6.1 ANM 16/9/7 – Proposal for Marking and Lighting of Windturbines of More Than 150m in Height. 12](#_Toc290041837)

[8.7 Input Papers reviewed by Working Group No. 1 13](#_Toc290041838)

[8.7.1 ANM16/8/3 Revision to Guideline 1033 rev1 13](#_Toc290041839)

[8.7.2 ANM16/8/5 Liaison note from e-Nav9 on ePelorus 13](#_Toc290041840)

[8.7.3 ANM16/13/8 Resilient Position Fixing – e-NAV9/8/6 13](#_Toc290041841)

[8.7.4 ANM16/13/9 e-Nav FAQ on level of Traditional AtoN – e-Nav9/output/16 13](#_Toc290041842)

[9 Working Group 2 – Continuous Improvement (WG2) 14](#_Toc290041843)

[9.1 Co-ordinate a limited review of the IALA NAVGUIDE, to incorporate amended Recommendations and Guidelines and other necessary updates (Task 6\*) 14](#_Toc290041844)

[9.2 Develop guidance on issues derived from revision of the MBS, such as the clarification of auxiliary marks, including examples of those debated during the consultation and drafting process (Task 7\*) 14](#_Toc290041845)

[9.3 Produce Quality Management and Training guidance for AtoN services and service providers in an e-Navigation environment, in support of the IALA World-Wide Academy. Review IALA Guideline 1052. (Task 8\*) 15](#_Toc290041846)

[9.4 Develop guidance for AtoN Authorities on level of service and changing user requirement; such as need for landfall lights and unlit AtoN (Task 9\*) 15](#_Toc290041847)

[9.5 Develop and update of IALA Recommendations O-113 on the Marking of fixed bridges over navigable waters, also considering the marking of overhead power lines (Task 10\*) 15](#_Toc290041848)

[9.6 Review IALA Recommendation O-104 of 1998, for off station Signals for Major Floating Aids to Navigation and extended to considerations of Buoys of Primary Navigation Significance (BPNS) and so called Superbuoys (Task 11\*) 16](#_Toc290041849)

[9.7 Co-operate with the other committees in the project for AtoN Status / information exchange and associated metadata (Task 13\*) 16](#_Toc290041850)

[9.8 Examine the use of Audible Signals as aids to navigation and develop an IALA Guideline on their future – in conjunction with the EEP Committee (Task 14\*) 16](#_Toc290041851)

[9.9 Review ANM Recommendations & Guidelines (Task 16\*) 16](#_Toc290041852)

[9.10 Update IALA Guideline 1058 on the use of simulation as a tool for waterway design and AtoN planning (Task17\*) 17](#_Toc290041853)

[9.11 Develop a supplementary Guideline to 1058 providing technical detail for simulator providers and procurers of simulation to ensure appropriate components and quality for AtoN features (Task 18\*) 17](#_Toc290041854)

[9.12 Review IALA Recommendation O-130 on Categorisation and Availability Objectives for Short Range Aids to Navigation (Task 19\*) 18](#_Toc290041855)

[9.13 Review Guideline 1078 – Use of AtoN in the design of fairways and waterways 18](#_Toc290041856)

[10 Develop a Recommendation for navigational safety matters within Marine Spatial Planning..(Task 15\*) 19](#_Toc290041857)

[11 Future Work Programme (2014 – 2018) 19](#_Toc290041858)

[12 Review of output and working papers 20](#_Toc290041859)

[13 Any Other Business 20](#_Toc290041860)

[13.1 Terms of reference (ToR) of Working Groups 20](#_Toc290041861)

[13.2 Workshops & Seminars (2010 – 2014) 20](#_Toc290041862)

[13.3 Use of AtoN in the Design of Fairways and Waterways 20](#_Toc290041863)

[13.4 Data structures 20](#_Toc290041864)

[13.5 e-Navigation 20](#_Toc290041865)

[13.6 IALA Annual Questionnaire 20](#_Toc290041866)

[13.7 Guideline for AIS AtoN licences 21](#_Toc290041867)

[14 Date and venue for next meeting 21](#_Toc290041868)

[15 Review of session report 21](#_Toc290041869)

[16 Closing of the Meeting 21](#_Toc290041870)

[17 List of Annexes 22](#_Toc290041871)

[ANNEX A ANM16 Committee Agenda 23](#_Toc290041872)

[ANNEX B ANM16 Participants 25](#_Toc290041873)

[ANNEX C Working Group Participants 35](#_Toc290041874)

[ANNEX D List of input papers 37](#_Toc290041875)

[ANNEX E List of Output and Working Papers 42](#_Toc290041876)

[ANNEX F Action Items 44](#_Toc290041877)

[ANNEX G Revision of the ANM Work Programme 47](#_Toc290041878)

[ANNEX H Text from presentation by Kim Kang On (6.1) 55](#_Toc290041879)



|  |  |
| --- | --- |
| ANM Committee  16th Session | 8 April 2011 |

Report of the 16th Session of the IALA ANM Committee

# General

The 16th meeting of the **ANM Committee** was held from 4 to 8 April, 2011 at IALA, with Phil Day as Chairman and Michael Skov as Vice Chairman. The Secretary for the meeting was Mike Hadley.

Apologies were received from:

|  |  |  |
| --- | --- | --- |
| **NAME** | **ORGANIZATION** | **COUNTRY** |
| Raul Escalante | Hidrovia | Argentina |
| Aigars Gaillis | Latvian Maritime Administration | Latvia |
| José Palva Welter Jr | Departamento de Sinalização Náutica | Brazil |

The Chairman opened the meeting by introducing himself and the Vice Chairman. He then extended a warm welcome to all the participants to ANM16, particularly those attending for the first time, noting that this was the largest ANM Committee meeting and the first in the new offices.

He then introduced the Secretary-General, who added his welcome, reminding the Committee that it was the best one; he having been a previous Vice Chairman. He remarked about the enlarged facilities, whilst acknowledging some teething problems before wishing the Committee a pleasant and successful meeting.

The Chairman then asked the members to introduce themselves before expressing his thanks to Kiru Coopoo of Transnet National Ports Authority, South Africa for a most succesful IALA Conference and the role that he had played in organising it. This statement was met with considerable applause. He concluded his remarks by referring to the recent horrendous events in Japan and conveyed the Committee’s condolences and best wishes to the Japanese members.

## Administrative Announcements

Mike Hadley provided information on health and safety other administrative details.

The Chairman thanked the Secretariat for the information provided.

Malcolm Nicholson then briefed the meeting’s social programme before the Chairman reviewed the week ahead (Paper ANM16/1/2 refers).

## Approval of the Agenda

The agenda (paper ANM16/1/1 rev1) was reviewed and adopted.

# Review of Action Items from ANM15

All action items were reviewed; paper ANM16/2/1 refers.

## Action Items – IALA Secretariat

It was noted that all were complete.

## Action Items – ANM Committee Members

The Chairman then ran through the action items arising from ANM15 attributed to the Committee members. The actions were largely complete but the following points were noted:

Action 24 remains open.

Action 27 remains open, whist some legal issues are being resolved.

Action 29 has resulted in one offer from Australia to host a Risk based workshop, possibly in conjunction with an ANM Committee meeting.

Action items

The Committee is requested to consider whether the removal of the content on superbuoys in the IALA Dictionary entry for a Lanby would be appropriate and consider the issue in the revision of IALA Recommendation O-104.

When available, Raven Kurtz is requested to provide an English version of a German recommendation on the building and marking of Off-shore windfarms with AtoN.

# Review of input papers

The list of input papers (ANM16/3/1 rev1) was noted.

The input papers were reviewed, briefly. It was noted that some papers do not require a reaction from the Committee and that the priority of some may need to be judged against the requirements of the Work Programme.

# Reports from other bodies

The Secretary reviewed the reports of the 50th session of the Council and the report from IMO MSC88. The Chairman reviewed the outcome of PAP20 and the IALA Strategy documents

## IALA Council 50th session

ANM16/4/1 refers.

From the report, the Committee noted:

* Council’s discussion about environmental issues;
* Revised rules of procedure and documentary quality control procedures;
* Discussion concerning workshops & seminars;
* Approved changes to the Committee’s Work Programme;
* Discussion about matters involving the IALA World-Wide Academy;
* Information about the 2014 Conference.

## Report of IMO MSC88

ANM16/4/2 refers.

From the report, the Committee noted the developments in relation to:

* Piracy;
* LRIT;
* SN.1/Circ.296 (IALA Risk Management Tool) ;
* SN.1/Circ.297 (IALA Maritime Buoyage System).

## Report of PAP20

ANM16/4/3, ANM16/4/4 & ANM16/4/5 refer.

From the report, the Committee noted:

* The review of progress with the IALA strategy; initial difficulty in reconciling Tasks with the strategy have now been resolved;
* Significant discussions with VTM; setting up of Correspondence Group to report to PAP and then the IALA Council;
* Discussion about e-navigation, IHO’s S-100 and the e-Navigation Universal Data Model;
* The need to provide input to the IALA Dictionary and assist in reviewing its contents;
* The progress being made with AtoN training and the setting up of a high-level Correspondence group to discuss accreditation;
* The intention to develop IWRAP Mk2 to show the impact of establishing new AtoN or services;
* The discussion about workshops & seminars.

# Reports from Rapporteurs

Where provided, presentations made during this agenda item form part of the output of the meeting and are on the FTP server.

## Risk Management and Risk Models (M1)

Jakob Bang provided a report supported by a presentation. In subsequent discussion it was noted that several authorities are finding it difficult to load AIS data into IWRAP. It was suggested that there is a need for users to be able to explain any differences revealed by using IWRAP and the results found in real life. It was remarked that AIS does not show all shipping and it was emphasised that there is a need for a qualitative approach (PAWSA) to run alongside the quantitative approach provided by IWRAP. Overall, it was agreed that there is a need for a full surface picture to explain any calculated results.

Action item

DaMSA is requested to investigate the difficulties experienced in loading AIS data into the commercial version of IWRAP Mk2 and report to ANM17.

## IALA Questionnaire (M2)

Jorge Teles gave a presentation on the current state of development of the Annual Questionnaire, indicating that the only free text required is for the name of the responding authority; the remainder of the questionnaire uses drop-down menus.

Victor Placido da Conceiciao then provided the results of analysis that had been possible from the results of the 2009 questionnaire, concentrating on the trends that were detectable. This is made possible where there is data from the same authority in successive years. However, data integrity is key if analysis is to be truly useful.

In discussion it was agreed that the late sending of the questionnaire can result in skewed data, as respondees are likely to use their current data and not that at the end of the previous year. It was also asked if it is really necessary to update the complete questionnaire on an annual basis.

Action item

The Secretariat is requested to distribute the 2010 Annual Questionnaire, requesting return in time of assessment at ANM17.

## Offshore manmade structures (OREI) (M3)

Raven Kurtz explained the background to the approach that he is taking. He first dealt with non-windfarms and then windfarms, stating that the trend of implementation is ever upward. He illustrated the trend by showing example areas where it is anticipated that there will be windfarms. The possible outputs from using the database being compiled were shown but, again, data integrity was seen to be an issue. It was also observed that comparison of track data with the outcome of known projects indicated the benefits of route planning.

In discussion it was agreed that the safe range at which vessels should pass windfarms was a current contentious issue, as different locations allowed for different considerations of spacing. It was stated that the marking of OREI was equally important when the structure(s) were being constructed, especially when there may be associated subsurface obstructions; the same consideration applies to sites being demolished, especially floating units. Finally, it was suggested that the cumulative effect of a number of sites, relatively closely spaced, needs to be considered during risk analysis.

## Development of e-Navigation within AtoN Authorities (M4)

Gerry Brine gave a presentation outlining e-Navigation Architecture – the shore-based perspective, proposed IMO Common Maritime Data Structure including AtoN information standards, e-Navigation developments in member countries and outcomes from the e-Navigation Underway” Conference. He observed that e-navigation is developing quite quickly but still has a long way to go.

During discussion it emerged that many members were unhappy that there was not enough user requirement input to the development of e-Navigation.

## Development of e-Navigation for AtoN users (M5)

ANM16/5/1 refers.

Robert McCabe said that the information that he was drawing on had been derived from the Nautical Institutes Sea Going Correspondence Group (SGCG); these are mainly sea-going masters but with input from some pilots. The key points that he made were:

* Concern about potential overload of information;
* A detectable preference for paper charts when planning;
* There is support for AIS AtoN;
* AIS:
* Manually entered data is suspect;
* Observable difference between AIS and radar targets.
* A user’s training can affect his / her approach to new equipment;
* Current equipment is considered user unfriendly.

In discussion it was agreed that there is an observable gap between ‘ship’ and ‘shore’.

## Development of mobile marine products for AtoN users (M6)

Marek Ledochowski covered the responses he had received since the last meeting and then looked to the future. His conclusions were that:

* It can be observed that many mobile applications concern weather conditions;
* It’s too early to have compatible application for different phones/tablets;
* There will be more and more interesting apps in the next few years;
* It would be beneficial if new mobile apps could be compatible with e-Navigation (government data).

In discussion, it was said that the unregulated mobile market understands the users’ requirements and, because of its agility, could end up leading e-Navigation. It was also observed that pilots continue to report abuses of mobile devices and chart systems.

Action item

Committee members are requested to provide relevant information to rapporteurs of monitoring items two months prior to each meeting of the ANM Committee.

In accordance with ANM tradition, it being his last meeting, Jan Ricken was thanked by the Chairman for his efforts over the past 6 years. This was followed by a small presentation.

# Presentations

Copies of the presentations made have been posted on the FTP server.

## Analysis of Maritime Accidents in the Republic of Korea

The script used by Kim Kang On, MLTM, is at Annex H.

In discussion, the Chairman observed that very similar results are seen in the UK. It was also asserted that ship owners and operators need to check the content of the planned maintenance for even new vessels and that experience shows that ships’ crews do not always conduct maintenance in accordance with the documentation that they have.

Kim Kang On said that he anticipated to present a demonstration of mobile telecommunications usage at ANM17.

## Effects on AtoN of earthquake & tsunami in Japan

Before beginning his presentation, Cdr. Hideki Noguchi, JCG, expressed his deeply felt appreciation of IALA’s and the Committee members’ consideration and sympathy for the recent events in Japan.

In his presentation, he illustrated the on rush of a tsunami, the damage that it can cause and the damage caused by the vibrations resulting from an earthquake. He indicated the scale of the damage, indicating that 13 lighthouses had yet to be assessed, due to inaccessibility by road or because of considerations of radioactivity.

The Chairman observed that Japan was clearly well prepared to deal with natural disasters but wondered how many other nations might be as well prepared, faced with the same ordeal.

## Floodlighting of lighthouse buildings

Malcolm Nicholson used a presentation to illustrate some research conducted by the GLAs of UK and Ireland, aimed at investigating whether floodlighting could be useful, at short range, to aid the identification of lighthouses set amongst significant background lighting. The research had indicated that cyan was the most useful colour to use, considering the background lighting around the lighthouse being trialled.

In discussion, it was said that due to the short ranges involved, the occasional reduction in visibility, due to weather, would suffer from additional atmospheric scattering but this was not expected to be significant. There was then a discussion about the environmental consequences of flood lighting, in which it was said that concern for possible light pollution had led to the use of ‘down lighting’, although protection against vandalism had also been a consideration. The discussion then turned to how one might deal with mixing colour floodlight lighthouses in the vicinity of other floodlight conspicuous buildings.

## Buoy stability simulation & Mobile virtual waterway

Professor Seung-Gi (Sunny) Gug illustrated some impressive research into the simulation of the stability of buoys, followed by a Korean national project on a mobile virtual waterway, which featured the concept of a floating harbour and a lighthouse based integrated information service system.

In discussion it was stated that there had, as yet, been no comparison of the stability of plastic and steel buoys, although there is no reason why this cannot be done. It was confirmed that simulated results had not been compared with ‘real life’, which would be very hard to achieve. However, the simulated results achieved, so far, had been compared favourably with calculated results. It was stated that mooring lengths used had been 1.5 x depth but that other lengths could be specified for the simulation.

The Chairman thanked all the presenters and the Committee for some lively comments.

# Establish Working Groups

The Chairman outlined the procedure to be followed by working groups, including the associated paperwork, after which two working groups were established and their tasks outlined.

|  |  |
| --- | --- |
| Working Group (WG) | Working Group Chairman / Vice Chairman |
| WG1 – Navigational Requirements | Roger Barker / Greg Tlapa |
| WG2 – Continuous Improvement | Gerry Brine / Malcolm Nicholson |

# Working Group 1 – Navigational Requirements (WG1)

The WG began with a review and discussion of the input papers assigned to WG1 (13 total). Many of the input papers were relevant to the current work program and have been included in this report under the appropriate task. Those input papers that were not immediately relevant to the current work program are included in section 8.7 of this report.

## Produce guidance for Aids to Navigation Authorities on the user requirements and practical applications of e-Navigation, from berth to berth. (Task 1\*)

Task Leader: Robert McCabe Assistant Task Leader: Victor Placido da Conceicao

The WG has produced a working document (ANM16/WG1/WP1) that will be carried over into ANM17 for continued development and refinement. Major categorical areas identified for this guideline include the following:

* General requirements
* Data source and provisions
* Requirements
* Communications (iterative and two-way)
* Stages of the Voyage
* The Role of the ATON as a data provider
* Data presentation
* Training
* HMI

These areas represent the architecture of the guideline and will be more fully developed over the next several sessions.

Action item

The Secretariat is requested to forward ANM16/WG1/WP1 to ANM17.

## Develop Recommendations on AtoN standards and navigational requirements in risk control measures included in e-Navigation (this would include a revision (or a replacement) of the existing Recommendations and Guideline on risk management (1018) (Task 2\*)

Pursuant to the overall workload management of the group, this task was deferred and will begin in earnest in ANM17.

## Develop guidance on the application of maritime surface picture (e.g. AIS traffic data) for analysis in risk assessment and the provision of Aids to Navigation (Task 3\*)

Task Leader: Roger Barker

A working document has been drafted (ANM16/WG1/WP2) and will be forwarded to ANM17 for continued development.

* Introduction;
* Scope:
* Systems available for overlays;
* Guidance on individual systems;
* Advice on vulnerabilities of various systems.
* Applications:
* Wreck marking, requirements for AtoN in general areas and assessment of surveys.
* Data Integrity (AIS data limitations and vulnerabilities).

Action item

The Secretariat is requested to forward ANM16/WG1/WP2 to ANM17.

## Develop guidance for AtoN Authorities in the use of Virtual Aids to Navigation assessing their use and contribution to safety of navigation (Task 4\*)

Task Leader: Hideki Noguchi Assistant Task Leader: Kalil Al Balushi

The WG reviewed the following input papers regarding this task. They were duly noted, will be fully considered in the completion of the task and do not require formal response from Committee:

1. ANM16/8/1 Cover note for Development of policy and new symbols for AIS ATON – Japan – NAV 57.
2. ANM 16/8/1A Development of policy and new symbols for AIS ATON – Japan – NAV57
3. ANM 16/8/6 Draft Recommendation O-143

The WG recommends rewording the task description to read ‘Review and update’ vice ‘Develop’.” Recommendation O-143 and Guideline 1062 should be included in this task.

Action item

The Secretariat is requested to draw to the attention of the Council the request to reword Task description 4 to read ‘Review and update’ vice ‘Develop’.

The WG conducted a preliminary review of the subject documents and have developed the following list for specific changes to the documents:

* Generally speaking, the documents are current, relevant, and very well written.
* There was considerable debate regarding the temporary (versus permanent) nature of a Virtual AtoN, and it is the desire of the WG to further debate this in full plenary at ANM17.
* The terms ‘floating and fixed’ are being considered for replacement by ‘static and dynamic’.

## Consider the IMO Wreck Removal Convention and its implications for AtoN Authorities and States. Develop a Recommendation for IALA Members including guidance on marking ‘floating wreckage’, taking into account existing IALA guidance (Task 5\*)

Task Leader: Jorge Teles Assistant Task Leaders: John Ainger & Owen James

The WG reviewed the LAP input paper (ANM 16/8/7 – Legal Requirements Surrounding the IMO Wreck Removal Convention) and considers it substantial enough to complete the assigned task.

A draft Recommendation (ANM16/WG1/WP5) is being developed and will be forwarded as a working document to ANM17.

The WG requested that the following items to be debated at full plenary:

1. Appropriateness of prescribing the light colour, with specific regard to a special (yellow) or the emergency wreck marking (blue and yellow).
2. As it pertains to the use of virtual AtoN, the perceived need for symbology difference for fixed versus floating obstruction and hazards (wreckage).
3. Requirements for position monitoring and position integrity as it pertains to drifting hazards and obstructions when marking with a virtual AtoN.

Action item

The Secretariat is requested to forward ANM16/WG1/WP5 to ANM17.

## Review IALA Recommendation O-139 on the Marking of Man-made Off-shore structures (Task 12\*)

Task Leader: Raven Kurtz Assistant Task Leader: Mats Höström

The WG reviewed the following input papers regarding this task. They were duly noted, will be fully considered in the completion of the task and do not require a formal response from Committee:

### ANM 16/9/7 – Proposal for Marking and Lighting of Windturbines of More Than 150m in Height.

In line with previous concerns regarding the intensity and colour of aviation lighting on current and proposed off shore wind farm sites, the proposals for additional lights at various positions on the tower itself will create additional confusion to the mariner. A solution such that the aviation lights are clearly recognized as such and are not mistaken for those lights provided as aids to marine navigation needs to be developed by the aviation industry.

A preliminary review of this Recommendation has been completed and several areas of note have been identified. Specific attention has been drawn to the ‘superseded’ references on the cover sheet of the existing recommendation; specifically, O-114, 116, 117, and 131. This task will ensure that all provisions listed in those references have been appropriately considered in O-139.

A working document has been developed (ANM16/WG1/WP6) and will be forwarded to ANM17 for further work. Specific areas being addressed by this review are:

* Improved diagrams to more clearly convey the lighting requirements.
* Consideration for describing a suitable safety distance between ‘the fairway’ and the Off-shore structure. Understanding this may be outside of the IALA remit, the solution may be to develop a list of relevant factors to consider and not necessarily prescribing a distance.
* Expanding the lighting requirements to address floating and tri-leg structures.
* Continue to assess the conflict between aviation and marine lighting requirements.

Action item

The Secretariat is requested to forward the draft revision of Recommendation O-139 (ANM16/WG1/WP6) to ANM17.

## Input Papers reviewed by Working Group No. 1

### ANM16/8/3 Revision to Guideline 1033 rev1

This paper, which does not require an output, was duly noted by the WG. This input paper, inspired by a marine accident involving a High Speed Craft (HSC), draws attention to potentially out-dated guidance in 1033 that may inadequately address focal height and background lighting. While the WG considers it appropriate to review this Guideline, it is recommended that it be considered for inclusion in the 2014 – 2018 work programme and not inserted for action into the present work program. The WG recognises that further consideration for wing-in-ground (WIG) craft, which can navigate over 1 – 10 metres from the surface, will be needed. If time permits, the WG will consider this issue, otherwise it may be a suitable item for the 2014 -2018 Work Programme.

Action item

The Secretariat is requested to forward ANM16/8/3 to ANM17.

### ANM16/8/5 Liaison note from e-Nav9 on ePelorus

This paper, which does not require an output, was duly noted by the WG. The WG considers the ePelorus concept (as described) to be an area laden with potential for the expansion and proliferation of e-Navigation. It may be appropriate to assign a Committee Rapporteur for tracking developments in this field, and as such, concurrently develop guidelines and recommendations as appropriate.

Action item

Marek Ledochowski is requested to include ePelorus in his rapporteur item.

### ANM16/13/8 Resilient Position Fixing – e-NAV9/8/6

Duly noted. No specific comments beyond the packet of ANM 16/13/10 (series) responses.

### ANM16/13/9 e-Nav FAQ on level of Traditional AtoN – e-Nav9/output/16

This paper, which does not require an output, was duly noted by the WG. In assessing the requirements for physical AtoN, consideration will be given to the proximity of danger, the sea room available, and the time required for manoeuvring, should this be required when electronic navigation systems fail.

The following papers were reviewed and discussed as a ‘series’ of input papers, all related to the same issue of PNT and the UK business case for eLoran:

1. ANM 16/13/10 Cover Note For ANM16/13/10A, ANM 16/13/10B, and ANM 16/13/10C.
2. ANM 16/13/10A Draft Input To IMO NAV 57 on Resilient PNT from e-NAV9.
3. ANM 16/13/10B Alternative Positioning – NAV57 Information Paper.
4. ANM 16/13/10C Draft Revised IALA Input To Nav57 on Resilient PNT.

Due to the time critical nature of these documents, the WG convened a bilateral subgroup (comprised of WG1 and WG2 members) to review and provide comment on these documents. Both papers B and C were edited and provided back to the Committee Chairman for ‘special processing’ in order to meet the IMO NAV57 schedule.

# Working Group 2 – Continuous Improvement (WG2)

The WG contained 24 members of which eight were attending an IALA Committee meeting for the first time.

The WG commenced its work by reviewing the agenda items and tasks assigned to WG2. The Chair and Vice-Chair provided clarification on what work needed to be completed at ANM 15 including working papers and potential output papers.

The Chair advised that the priority outputs for the WG2 at ANM 16 were the following Recommendations and Guidelines:

* Guideline 1058 – Use of simulation as a tool for waterway design and AtoN planning
* Guideline 1078 – Use of AtoN in the design of fairways

The WG established new or reconvened existing specialist task groups, each with a dedicated Task Leader, to progress individual agenda Items.

## Co-ordinate a limited review of the IALA NAVGUIDE, to incorporate amended Recommendations and Guidelines and other necessary updates (Task 6\*)

John Festarini (Canadian Coast Guard) has agreed to assume the NAVGUIDE Co-ordinator role.

An action plan for the revision of the NAVGUIDE (ANM16/output/13) as well as a timetable (ANM16/output/14) was developed to ensure that the revisions are completed by ANM 21 in October 2013.

A liaison note (ANM16/output/8) was prepared for distribution to all IALA Committees together with the action plan and timetable requesting Committee Chairs to nominate task leaders for their respective sections of the NAVGUIDE.

Action item

The Secretariat is requested to forward the liaison note (ANM16/output/8), the action plan (ANM16/output/13) and the timetable (ANM16/output/14) for the review of the NAVGUIDE to all other Committees and the Secretariat, for their action.

## Develop guidance on issues derived from revision of the MBS, such as the clarification of auxiliary marks, including examples of those debated during the consultation and drafting process (Task 7\*)

Task Leader: Bjoern Erik Krosness Assistant Task Leader: Malcolm Nicholson

Although this task is scheduled to be undertaken during Sessions 17-19 an input paper was received and reviewed.

|  |  |
| --- | --- |
| ANM 16/9/6 | Amendment of IALA Recommendation O-110, etc.,  Related to Emergency Wreck Marking Buoy (EWMB) |

ANM 16/9/6 from Japan Coast Guard highlighted the fact that, as a result of the inclusion of the EWMB in the MBS, a number of existing IALA Recommendations and Guidelines are impacted including *E-110 For the rhythmic characters of lights on aids to navigation* requiring amendment and *O-133 Emergency Wreck Marking Buoy now* becoming obsolete.

A liaison note to EEP (ANM16/output/15) was prepared requesting that they amend *E-110 For the rhythmic characters of lights on aids to navigation* to include the characteristics of the EWMB.

An information paper for Council was prepared (ANM16/output/16) requesting that the IALA Council revoke Recommendation O-133 Emergency Wreck Marking Buoy and withdraw it from its list of publications.

Action items

The Secretariat is requested to forward the liaison note on a suggested amendment to E-110 (ANM16/output/15) to the EEP Committee for its consideration and comment as appropriate.

The Secretariat is requested to forward the information paper regarding the revoking of IALA recommendation O-133 (ANM16/output/16) to the IALA Council for its approval.

The Secretariat is requested to provide an electronic copy of the MBS Guidelines as an input paper to ANM17.

## Produce Quality Management and Training guidance for AtoN services and service providers in an e-Navigation environment, in support of the IALA World-Wide Academy. Review IALA Guideline 1052. (Task 8\*)

Task Manager: Gerry Brine Assistant Leader: TBC

This task is scheduled to be undertaken during Sessions 17-19. A number of input papers were received from the e-NAV Committee. These were briefly reviewed but will be taken into account when the Task is begun at ANM17.

## Develop guidance for AtoN Authorities on level of service and changing user requirement; such as need for landfall lights and unlit AtoN (Task 9\*)

Task Leader: Bjoern Erik Krosness Assistant Task Leader: John Festarini

The task group commenced reviewing the Guideline 1004 and noted that it will be a challenging task, as the topic has a major relevance to AtoN authorities in an environment of increasing stakeholder scrutiny and financial constraints. It will be important to obtain wide user and other stakeholder input.

It was noted that the task description should be amended to ‘Review guidance…’ because Guideline 1004 already existed.

John Festarini will provide a presentation at ANM17 on the methodology for the model provided in the Annex in the current Guideline and how the Canadian Coast Guard will be updating the model.

Action item

WG2 is requested to canvass their organisations and stakeholders and provide input inter-sessionally in time for consideration at ANM17.

John Festarini is requested to provide a presentation on the Canadian methodology in respect to Guideline 1004.

The Secretariat is requested to draw to the attention of the Council the request to amend the title of the task from ‘Develop guidance …..’ to Review guidance.’

## Develop and update of IALA Recommendations O-113 on the Marking of fixed bridges over navigable waters, also considering the marking of overhead power lines (Task 10\*)

Task Leader: John Festarini Assistant Task Leader: Wenzhi Yang

One input paper was received which was a scoping document prepared at ANM15

|  |  |
| --- | --- |
| ANM 16/9/2 | Task Working Group on Recommendation O-113 |

The task group assigned to this task reviewed the input provided inter-sessionally by IALA members and began work on a draft revised Recommendation O-113 (ANM16/WG2/WP1). WG2 debated whether there was a requirement for a separate guideline on the marking of overhead power lines and concluded that a separate guideline would be beneficial but should be included in the next work programme.

Some graphics of suitable examples of marking were included in the document.

Action item

The Secretariat is requested to forward Recommendation O-113 (ANM16/WG2/WP1) to ANM17.

## Review IALA Recommendation O-104 of 1998, for off station Signals for Major Floating Aids to Navigation and extended to considerations of Buoys of Primary Navigation Significance (BPNS) and so called Superbuoys (Task 11\*)

Task Leader: Kiru Coopoo

The task group commenced the review and updating of the guideline (ANM16/WG2/WP2). A key issue to examine will be the continued relevance of the references to the Lisbon Agreement Concerning Manned Lightships not on their Station of 1930 in the current version.

Action item

The Secretariat is requested to forward the draft guideline (ANM16/WG2/WP2) to ANM17

## Co-operate with the other committees in the project for AtoN Status / information exchange and associated metadata (Task 13\*)

Task Leader: Gerry Brine Assistant Task Leaders: Victor Placeido da Conceica

This task is scheduled to be undertaken during Sessions 17-19. The task will involve reviewing e-NAV Committee documentation and undertaking a gap analysis and preparing appropriate input from ANM to e-NAV.

Progress by the e-NAV Committee on this issue is also being reported to ANM in the rapporteur report on the Development of e-Navigation within AtoN Authorities.

## Examine the use of Audible Signals as aids to navigation and develop an IALA Guideline on their future – in conjunction with the EEP Committee (Task 14\*)

Task Leader: Bob Trainor Assistant Task Leader: John Festarini

The task group reviewed the guidance in the NAVGUIDE. The outcomes of the 1985 IALA Conference held in Brighton UK were also reviewed to clarify the reasons why IALA determined at that time that audio signals should be defined as hazard markers and not aids to navigation.

It is expected that the Guideline would not be very extensive but would potentially allow the amount of detail in the NAVGUIDE to be significantly reduced.

A scoping document for the task was developed (ANM16/WG2/WP3).

Action item

The Secretariat is requested to forward (ANM16/WG2/WP3) to ANM 17.

## Review ANM Recommendations & Guidelines (Task 16\*)

Task Leader: Kiru Coopoo Assistant Task Leader: Gerry Brine

This task involves undertaking a cyclical review of all ANM Guidelines and Recommendations during each 4-year work programme. It was noted that specific document reviews already in the work programme formed part of the performance of this task.

A list of ANM Recommendations and Guidelines was reviewed in terms of currency and priority and a schedule for reviewing these documents was developed for reference and monitoring of progress by the ANM Committee (ANM16/WG2/WP/4).

Action item

The Secretariat is requested to forward (ANM16/WG2/WP4) to ANM 17.

## Update IALA Guideline 1058 on the use of simulation as a tool for waterway design and AtoN planning (Task17\*)

Task Leader: Peter Sorensen Assistant Task Leader: Cathrine Steenberg / Peter Jensen

Input papers were received from the Netherlands and from the EEP Committee:

|  |  |
| --- | --- |
| ANM 16/9/4 | Netherlands comments on revision of Guideline 1058 |
| ANM 16/9/10 | Liaison Note – Simulation in the Design of AtoN |

The task group reviewed the extensive list of comments and questions from the Netherlands. Some of these were taken into account in revising the draft Guideline 1058 whilst others were considered too technical and should be included / considered in drafting the more detailed simulation tools guideline(s). In some cases the comments were not agreed with. A table providing ANM’s responses to all of the Netherlands’ questions & comments was prepared (ANM16/output/11). A draft letter, for signature by the Secretary-General (ANM16/output/10), to which ANM16/output/11 would be an Annex, was drafted.

Action item

The Secretariat is requested to forward a letter from the Secretary-General to the Netherlands (ANM16/output/10) thanking them for their comments and questions and attaching ANM’s table of responses (ANM16/output/11) as an Annex.

EEP had commented (ANM16/9/10) that although simulation is excellent for modelling general navigation techniques, EEP recommends that at this time, IALA members should be cautious in utilising simulators for viewing trials and comparisons of light sources and daymarks for R&D purposes. EEP also provided a revised list for Annex A of the guideline with the substantive change being the provision of additional detail they considered should be used when providing technical detail to simulator manufacturers and providers.

Action item

The Secretariat is requested to forward the draft guideline (ANM16/output/12) to Council for approval.

## Develop a supplementary Guideline to 1058 providing technical detail for simulator providers and procurers of simulation to ensure appropriate components and quality for AtoN features (Task 18\*)

Task Leader: Peter Sorensen Assistant Task Leader: Cathrine Steenberg / Peter Jensen

The input papers mentioned above received for Task 9.10 also relate to Task 18.

|  |  |
| --- | --- |
| ANM 16/9/10 | Liaison Note – Simulation in the Design of AtoN |

The task group prepared a 1st draft of the new supplementary guideline (ANM16/WG2/WP4), taking into account the input papers where relevant.

The EEP Committee considered that it is best placed to provide technical details to simulator providers and it should be provided with the detailed requirements in order that these should be considered for the provision of technical details to manufacturers and providers of simulation equipment where required.

WG2 acknowledges the role and expertise of the EEP Committee in technical matters but considers that the user needs are paramount in guiding the use of simulation tools for AtoN design and therefore recommends that the ANM Committee continue to be responsible for this guideline and undertakes to provide the latest version of the draft guideline as an input to EEP17 (ANM16/output/18 & ANM16/WG2/WP5). A liaison note to EEP was prepared along these lines (ANM16/output/9).

Action item

ANM members are requested to review the draft guideline (ANM16/WG2/WP4) inter-sessionally and provide comments in time for consideration at ANM17.

The Secretariat is requested to forward the liaison note on a supplementary Guideline to Guideline 1058 (ANM16/output/9) and the working draft guideline (ANM16/output/18) to EEP17.

The Secretariat is requested to forward the draft supplementary Guideline to Guideline 1058 (ANM16/WG2/WP5) to ANM17.

## Review IALA Recommendation O-130 on Categorisation and Availability Objectives for Short Range Aids to Navigation (Task 19\*)

Task Leader: Malcolm Nicholson Assistant Task Leader: Ian Burgess

|  |  |
| --- | --- |
| ANM 16/9/ | Liaison Note – Availability of synchronised and sequenced buoy lighting systems |

The EEP Committee have requested the ANM Committee consider the issue of synchronising/sequencing failure or single or multiple light failures within a pattern of buoys and the consequent effect on availability and report back. A response was prepared (ANM16/output/6).

O-130 on Categorisation and Availability Objectives for Short Range Aids to Navigation was reviewed during ANM16 and was considered to provide adequate guidance to Competent Authorities for the categorisation of availability for synchronized / sequenced lights. No changes to the body text were made. However, the related documentation section was updated to include IALA Guideline 1037 Data Collection for Aids to Navigation Performance Calculation (ANM16/output/7).

Action item

The Secretariat is requested to forward the liaison note on the availability of synchronised and sequenced buoy lighting systems (ANM16/output/6) to EEP 17.

The Secretariat is requested to forward the revised Recommendation O-130 (ANM16/output/7) to Council for approval.

## Review Guideline 1078 – Use of AtoN in the design of fairways and waterways

Task Leader: Martin Bransby Assistant Task Leader: Hendrik Eusterbarkey

|  |  |
| --- | --- |
| ANM16/13/4 | Information on new draft of IALA Guideline No. 1078 Use of Aids to Navigation in the Design of Fairways and  Waterways |
| ANM 16/13/5 | Draft revised Guideline 1078 |

As requested by Council 48 the draft guideline was reviewed by Working Group 2 to improve clarity and readability. The review of the draft guideline has been completed (ANM16/output/5).

The main body of the document has been reduced in size with extensive editing to improve readability. A set of definitions has been included.

Action item

The Secretariat is requested to forward the draft guideline (ANM16/output/5) to Council for approval.

The WG also reviewed the following additional and information papers:

|  |  |  |
| --- | --- | --- |
| Paper # | Topic | Proposed action |
| ANM16/13/3 | Note from e-NAV Vice Chair to all Committees about Data Structures | Fwd to ANM17 |
| ANM16/13/7 | e-Navigation Architecture ‘Picture Book’ Information Paper on e-NAV-140 | Fwd to ANM17 |
| ANM16/13/11 | Comparable Range of Daymarks and Lights | Fwd to ANM17 |
| ANM16/INF/4 | USCG AtoN Strategic Plan | Summary circulated to Committee |
| ANM16/INF/5 | Operating anomalies identified within ECDIS – Draft submission to MSC89 | Note |
| ANM16/INF/6 | RAL Colours for Daymarks | Note |

Action item

The Secretariat is requested to forward ANM16/13/3, ANM16/13/7 & ANM16/13/11 to ANM17.

During the meeting, a summary of the USCG AtoN Strategic Plan (ANM16/output/19) was produced and the WG requested that it be forwarded to ANM members.

Action item

The Secretariat is requested to forward the summary of the USCG AtoN Strategic Plan (ANM16/output/19) to ANM Committee members.

# Develop a Recommendation for navigational safety matters within Marine Spatial Planning..(Task 15\*)

In line with the IALA Council’s recommendation, the Chair and Vice Chair composed a questionnaire on Marine Spatial Planning (ANM16/Chair/WP1), which will be prepared and issued inter-sessionally.

Action item

The Chairman and Vice Chairman of the ANM Committee are requested to progress the development of the Marine Spatial Planning questionnaire.

When available, the Secretariat is requested to forward the Marine Spatial Planning questionnaire to the IALA membership.

# Future Work Programme (2014 – 2018)

Apart from items identified in sections 8 & 9 no other items have been identified at this stage. The Chairman said that he would ask that the IALA strategy for 2014 – 2018 be made available for the Committee to more effectively plan for the next Work Programme.

Action item

The Committee are requested to consider potential items for the 2014 – 2018 before ANM17.

# Review of output and working papers

WG Chairmen outlined the work undertaken and both expressed their thanks to their WG members for much hard work and the progress made. The output and working papers were reviewed and their disposition agreed.

In discussion the following points emerged:

* The validity of including tugs and their manoeuvring requirements in simulations in the revision of IALLA Guideline 1058;
* There is a need to further discuss the terms static, dynamic and permanent, in regard to virtual AtoN.

The Committee Chairman then thanked all involved in the production of the output documents and the hard work that had gone into producing them.

# Any Other Business

## Terms of reference (ToR) of Working Groups

The Committee agreed the WG terms of reference at ANM16/output/17.

Action item

The Secretariat is requested to post the WG ToR (ANM16/output/17) on the ftp server.

## Workshops & Seminars (2010 – 2014)

Requests for a seminar (ANM16/output/3) and a workshop (ANM16/output/4) were produced, together with suggested changes to event dates and venues for discussion at PAP21.

Action item

The Secretariat is requested to forward the Risk Management seminar proposal (ANM16/output/3) to the IALA Council for approval.

The Secretariat is requested to forward the Marine Spatial Planning workshop proposal (ANM16/output/4) to the IALA Council for approval.

The Secretariat is requested to draw the attention of PAP to the proposed changes in dates and venues for ANM19.

## Use of AtoN in the Design of Fairways and Waterways

This was covered under agenda item 9. It was noted that the title of the document has now been changed to Use of AtoN in the Design of Fairways.

## Data structures

This was covered under agenda item 9.

## e-Navigation

This was covered under agenda item 8.

## IALA Annual Questionnaire

The Committee agreed that the policy for distributing the Annual Questionnaire should be to retain the use of the current .pdf version until 2014 and that the 2010 questionnaire should be distributed in time to provide results to ANM17. It was further decided that at or before ANM21, the questionnaire would be reviewed, with a view to making it more strategic and that the result would then be used for the period 2014 – 2018.

Action item

The Secretariat is requested to distribute the 2010 Annual Questionnaire to IALA members and ANM Committee members by 30 April 2011.

ANM Committee members are requested to monitor the processing of the questionnaire within their administrations / organisations.

It was requested that consideration be given to providing previous results of Annual Questionnaires on the IALA Committee website.

Action item

The Secretariat is requested to consider the provision of previous results of Annual Questionnaires on the IALA Committee website.

## Guideline for AIS AtoN licences

The Chairman and Vice Chairman produced a draft Guideline on Authorisation of AIS AtoN (ANM16/output/2).

Action item

The Secretariat is requested to forward the draft Guideline on Authorisation of AIS AtoN (ANM16/output/2) to the IALA Council for approval.

# Date and venue for next meeting

It is intended that ANM17 will meet between 17 and 21 October, 2011 at IALA.

# Review of session report

The report was reviewed and then approved by the Committee.

During the review, Malcolm Nicholson demonstrated the current version of the GLA R&RNAV Marine AtoN Light Calculator (MALC), details of which can be found at [www.gla-rrnav.org](http://www.gla-rrnav.org). He then gave details of future developments of the calculator.

A discussion took place about how the organisation of the preparations for the Committee could be improved. The Chairman undertook to raise this issue at PAP21, as any changes need to be made ‘across all Committees’.

Action item

The Secretariat is requested to forward the report of ANM16 (ANM16/output/1) to the Council, to note.

# Closing of the Meeting

The Chairman said that it had been a successful week and thanked all ANM Committee members for their hard work, which had produced such an impressive output. He said that he very much appreciated the positive approach taken at the meeting, whilst not losing sight of the important social element of the meeting. Appreciation was expressed to Greg Tlapa, who was attending his final ANM meeting, for his involvement and commitment. Thanks were also expressed to Malcolm Nicholson, who may be transferring to the EEP Committee, for the considerable contribution that he makes with his knowledge and as one of the social secretaries. Finally, thanks were expressed to the Secretary and the IALA staff for their cheerful and efficient support.

A special mention was made of Christophe Laglenne’s cheerful and tuneful placing of a bucket in the plenary room, after condensation had begun to drip from the ceiling.

There being no further business, the Chairman then wished everyone a safe journey home and wished everyone well for the coming months before declaring the meeting closed.

# List of Annexes

1. Agenda

A copy of the agenda is at Annex A.

1. Participants

A list of participants is at Annex B.

1. Working Group Participants

A list of working group participants is at Annex C.

1. Input Papers

A list of input papers is at Annex D.

1. Output and Working papers

A list of output and working papers is at Annex E.

1. Action Items

A list of action items is at Annex F.

1. Revision of the Work Programme

An updated ANM Committee Work Programme for 2010-2014 is at Annex G. Changes made at ANM16 have been highlighted.

1. Presentation script

The text used by Kim Kang On (see section 6.1) is at Annex H.

1. ANM16 Committee Agenda

**16th Meeting of the Aids to Navigation Management Committee**

The 16th meeting of the **ANM Committee** will be held from 4 – 8 April, 2011, at IALA, 10-14 rues Gaudines, Saint Germain en Laye, France.

The opening plenary will commence at 1400 on Monday, 4 April, 2011, and the closing plenary will end at approximately 1300 on Friday, 8 April, 2011.

Committee Chair, Vice-Chair and working group Chairpersons are requested to meet at 1000 on Monday, 4 April, 2011.

Work items / Tasks being addressed during this meeting are listed in the final table of Annex G of the report of the previous meeting, which was included in the initial invitation to this meeting.

Changes from ANM15.

**AGENDA**

1. Approval of the agenda
2. Review of action items from last meeting
3. Review of input papers
4. Reports from other bodies:
   1. IALA Council – 50th Session, December 2010
   2. IMO – MSC88, December 2010
   3. PAP20 – October 2010
   4. Strategy monitoring – October 2010
5. Report from rapporteurs:
   1. Risk Management and Risk Models (M1\*)
   2. IALA Questionnaire (M2\*)
   3. Offshore manmade structures (OREI) (M3\*)
   4. Development of e-Navigation within AtoN Authorities (M4\*)
   5. Development of e-Navigation for AtoN users (M5\*)
   6. Development of mobile marine products for AtoN users (M6\*)
6. Presentations:
   1. Analysis of Maritime Accidents in South Korea Kim Kang On
   2. Effects on AtoN of the earthquake & tsunami in Japan Hideki Noguchi
   3. Floodlighting of lighthouse buildings Malcolm Nicholson
   4. Buoy stability & mobile virtual waterway Sunny Gug
7. Establish Working Groups
8. Working Group 1 – Navigational Requirements
   1. Produce guidance for Aids to Navigation Authorities on the user requirements and practical applications of e-Navigation, from berth to berth. (Task 1\*)
   2. Develop Recommendations on AtoN standards and navigational requirements in risk control measures included in e-Navigation (this would include a revision (or a replacement) of the existing Recommendations and Guideline on risk management (1018)). (Task 2\*)
   3. Develop guidance on the application of maritime surface picture (e.g. AIS traffic data) for analysis in risk assessment and the provision of Aids to Navigation (Task 3\*)
   4. Develop guidance for AtoN Authorities in the use of Virtual Aids to Navigation assessing their use and contribution to safety of navigation (Task 4\*)
   5. Consider the IMO Wreck Removal Convention and its implications for AtoN Authorities and States. Develop a Recommendation for IALA Members including guidance on marking ‘floating wreckage’, taking into account existing IALA guidance (Task 5\*)
   6. Review IALA Recommendation O-139 on the Marking of Man-made Off-shore structures (Task 12\*)
9. Working Group 2 – Continuous Improvement
   1. Co-ordinate a limited review of the IALA NAVGUIDE to incorporate amended IALA Recommendations and Guidelines and other necessary updates (Task 6\*)
   2. Develop guidance on issues derived from revision of the MBS, such as the clarification of auxiliary marks, including examples of those debated during the consultation and drafting process (Task 7\*)
   3. Produce Quality Management and Training guidance for AtoN services and service providers in an e-Navigation environment, in support of the IALA World-Wide Academy. Review IALA Guideline 1052 (Task 8\*)
   4. Develop guidance for AtoN Authorities on level of service and changing user requirement; such as need for landfall lights and unlit AtoN (Task 9\*)
   5. Develop and update of IALA Recommendation O-113 on the Marking of fixed bridges over navigable waters, also considering the marking of overhead power lines (Task 10\*)
   6. Review IALA Recommendation O-104 of 1998, for off station Signals for Major Floating Aids to Navigation and extended to considerations of Buoys of Primary Navigation Significance (BPNS) and so called Superbuoys (Task 11\*)
   7. Co-operate with the other committees in the project for AtoN Status / information exchange and associated metadata (Task 13\*)
   8. Examine the use of Audible Signals as aids to navigation and develop an IALA Guideline on their future – in conjunction with the EEP Committee (Task 14\*)
   9. Review ANM Recommendations & Guidelines for updating (Task16\*)
   10. Update IALA Guideline 1058 on the use of simulation as a tool for waterway design and AtoN planning (Task17\*)
   11. Develop a supplementary Guideline to 1058 providing technical detail for simulator providers and procurers of simulation to ensure appropriate components and quality for AtoN features (Task 18\*)
   12. Review IALA Recommendation O-130 on Categorisation and Availability Objectives for Short Range Aids to Navigation (Task 19\*)
10. Develop a Recommendation for navigational safety matters within Marine Spatial Planning (Task 15\*)
11. Future Work Programme (2014 – 2018)
12. Review of output and working papers
13. Any Other Business
    1. Terms of reference of WG
    2. Workshops & seminars
    3. Use of AtoN in the Design of Fairways and Waterways
    4. Data structures
    5. e-Navigation
14. Date and venue of next meeting
15. Review of session report
16. ANM16 Participants

Country

Australia Australian Maritime Safety Authority

Mr Gerry BRINE

25 Constitution Avenue

Canberra ACT 2601

Australia

Phone +61 2 6279 5049

Fax +61 2 6279 5986

Mobile phone: +61 408 769 400

e-mail (main): [gerry.brine@amsa.gov.au](mailto:gerry.brine@amsa.gov.au)

Canada Canadian Coast Guard

Mr John FESTARINI

200 Kent Street

Ottawa, Ontario

K1A 0E6

Canada

Phone +1 613 998 1411

Fax +1 613 998 8428

Mobile phone: +1 613 612 5022

e-mail (main): [john.festarini@dfo-mpo.gc.ca](mailto:john.festarini@dfo-mpo.gc.ca)

China China MSA

Mr Jinzhu CHAI

369, Jiefang Road

Hexi District

Tianjin

Peoples Republic of China

Phone +86 (0)22 588 76900

Fax +86 (0)22 588 76904

Mobile phone:

e-mail (main): [cjz6919@163.com](mailto:cjz6919@163.com)

China MSA

Mr Wenzhi YANG

190, Siping Road

Hongkou District

Shanghai

Peoples Republic of China

Phone +86 (0)21 539 66072746

Fax +86 (0)21 660 72744

Mobile phone:

e-mail (main): [yangwenzhi@msa.gov.cn](mailto:yangwenzhi@msa.gov.cn)

Denmark Danish Maritime Safety Administration

Mr. Jakob BANG

Overgaden oven Vandet 62 B

P.O. Box 1919

DK-1023 Copenhagen K

Denmark

Phone + 45 32 68 95 83

Fax

Mobile phone:

e-mail (main): [cjb@frv.dk](mailto:cjb@frv.dk)

Denmark Danish Maritime Safety Administration (DaMSA)

Mr. Michael SKOV

Head of Division, Aids to Navigation Management

P.O. Box 1919

DK-1023 Copenhagen K

Denmark

Phone + 45 32 68 95 78

Fax + 45 32 57 43 41

Mobile phone: + 45 20 53 25 84

e-mail (main): [msk@frv.dk](mailto:msk@frv.dk)

FORCE Technology

Mr. Peter S. JENSEN

Hjortekjaersvej 99

2800 Kgs. Lyngby

Denmark

Phone +45 7215 7715

Fax

Mobile phone: +45 29291818

e-mail (main): [pjs@force.dk](mailto:pjs@force.dk)

FORCE Technology

Mr. Peter SORENSEN

Hjortekjaersvej 99

2800 Kgs. Lyngby

Denmark

Phone +45 7215 7862

Fax +45 7215 7701

Mobile phone: +45 2269 7162

e-mail (main): [pks@force.dk](mailto:pks@force.dk)

FORCE Technology

Ms. Cathrine STEENBERG

Hjortekjaersvej 99

2800 Kgs. Lyngby

Denmark

Phone +45 72 15 7796

Fax

Mobile phone: +45 22 69 72 96

e-mail (main): [cms@force.dk](mailto:cms@force.dk)

France ANFR, Technopole Brest-Iroise

Mr Christian RISSONE

Rue Pierre Rivoalon CS13829

29238 Brest Cedex 3

Phone +33 298 34 12 35

Fax +33 298 34 12 20

Mobile phone: +33 683 81 23 03

e-mail (main): [rissone@anfr.fr](mailto:rissone@anfr.fr)

CETMEF

Capt. Philippe LIJOUR

Technopole Brest-Iroise

B.P. 5

29280 Plouzané

France

Phone + 33 (0)2 98 05 67 72

Fax + 33 (0)2 98 05 67 67

Mobile phone:

e-mail (main): [philippe.lijour@developpement-durable.gouv.fr](mailto:philippe.lijour@developpement-durable.gouv.fr)

France Direction des Affaires Maritimes

M. Jean-Luc FONTAN

MEEDDTL-DGITM-DAM

La Grande Arche – Paroi Sud

92055 La Défense cedex

France

Phone + 33 (0)1 40 81 62 86

Fax + 33 (0)1 40 81 80 72

Mobile phone: + 33 6 73 34 17 99

e-mail (main): [jean-luc.fontan@developpement-durable.gouv.fr](mailto:jean-luc.fontan@developpement-durable.gouv.fr)

Germany Wasser- und Schifffahrtsdirektion Nord

Mr Hendrik EUSTERBARKEY

Hindenburgufer 247

24106 Kiel

Germany

Phone + 49 431 3394 5703

Fax + 49 431 3394 6399

Mobile phone: +49 179 96 94 954

e-mail (main): [hendrik.eusterbarkey@wsv.bund.de](mailto:hendrik.eusterbarkey@wsv.bund.de)

Wasser-und Schifffahrtsdirektion Nord

Captain Raven KURTZ

Hindenburgüfer 247

24106 Kiel

Germany

Phone +49 431 3394 8120

Fax +49 431 3394 6399

Mobile phone: +49 173 610 61 04

e-mail (main): [raven.kurtz@wsv.bund.de](mailto:raven.kurtz@wsv.bund.de)

e-mail (alternative): [ravenkurtz@web.de](mailto:ravenkurtz@web.de)

IALA Technical Coordination Manager

Dr. Mike HADLEY

20ter, rue Schnapper

78100 Saint Germain en Laye

France

Phone +33 1 34 51 70 01

Fax +33 1 34 51 82 05

Mobile phone:

e-mail (main): [m.hadley@orange.fr](mailto:m.hadley@orange.fr)

e-mail (alternative): [advnav@btinternet.com](mailto:advnav@btinternet.com)

Ireland Commissioners of Irish Lights

Captain Robert McCABE

Harbour Road

Dun Laghoaire

Co. Dublin

Ireland

Phone +353 1 271 5541

Fax +353 1 2715 564

Mobile phone: +353 87 968 2537

e-mail (main): [r.mccabe@cil.ie](mailto:r.mccabe@cil.ie)

Japan Japan Aids to Navigation Association (JANA)

Mr. Tamotsu IKEDA

Kaiji-Center Bldg.

4-5, Kouji-Machi, Chiyoda-ku

Yokyo 102-0083

Japan

Phone +81 (0)3 3230 1470

Fax +81 (0)3 3230 1050

Mobile phone:

e-mail (main): [ikeda\_t@jana.or.jp](mailto:ikeda_t@jana.or.jp)

Japan Coast Guard

Mr Hiroshi TSUCHIZAKI

2-1-3 Kasumigaseki Chiyoda-ku

Tokyo

Japan

Phone +81 3 3591 5047

Fax

Mobile phone:

e-mail (main): [keikakuunyo-w2ry@kaiho.mlit.go.jp](mailto:keikakuunyo-w2ry@kaiho.mlit.go.jp)

Japan Coast Guard, Maritime Traffic Department, AtoN Engineering Division

Cdr. Hideki NOGUCHI

2-1-3 Kasumigaseki

Chiyoda-ku

Tokyo 100-8918

Japan

Phone +81 3 3591 6361

Fax +81 3 3591 5468

Mobile phone: +81 803468 1198

e-mail (main): [noguchi-i8twy@kaiho.mlit.go.jp](mailto:noguchi-i8twy@kaiho.mlit.go.jp)

e-mail (alternative): [hideki.noguchi@gmail.com](mailto:hideki.noguchi@gmail.com)

Korea Daekee Marine Corp.

Mr Chong-Hwan BANG

N° 58-5 Sungui-Dong

Cheil Building, 3rd floor

Nam-Gu, Incheon (402-812)

Republic of Korea

Phone

Fax

Mobile phone:

e-mail (main):

Korea Association of Aids to Navigation

Mr Min-Su JEON

#12F, IT Castle II Kasan

371-16

Seoul

Republic of Korea

Phone +82 2 2627 8312

Fax +82 2 2627 8315

Mobile phone: +82 1098 50 3448

e-mail (main): [minsuids@gmail.com](mailto:minsuids@gmail.com)

Korea Korea Maritime University

Prof. Seung-Gi GUG

#1, Dongsam-dong

Yeongdo-gu

Busan 606-791

Republic of Korea

Phone +82 51 410 4227

Fax +8251 410 4227

Mobile phone: +82 10 6396 4227

e-mail (main): [cooksg@hhu.ac.kr](mailto:cooksg@hhu.ac.kr)

MLTM

Mr Kang-On KIM

#88, Gwanmun-yo

Gwacheon-City

Gyeong province 427-721

Republic of Korea

Phone +82 2 2110 6788

Fax +82 2 504 4676

Mobile phone: +82 10 5184 8271

e-mail (main): [ohmiri@korea.kr](mailto:ohmiri@korea.kr)

e-mail (alternative): [ohmiri@mltm.go.kr](mailto:ohmiri@mltm.go.kr)

Mozambique INAHINA

Mr Simiao Antonio MUNGUAMBE

Av. Karl Marx 158 - 5/12 Floor

Postal code 2089

Maputo

Mozambique

Phone +258 21 430 186

Fax +258 21 430 185

Mobile phone: +258 824881530 / +258 84

e-mail (main): [simungua@inahina.gov.mz](mailto:simungua@inahina.gov.mz)

e-mail (alternative): [ciniels@yahoo.com.br](mailto:ciniels@yahoo.com.br)

Netherlands Ministry of Infrastructure & the Environment

Mr Wim VERHAGEN

P O Box 5807

2280 HV Riijswijk

The Netherlands

Phone +31 70 336 66 80

Fax +31 70 319 4238

Mobile phone: +31 6 270 38 245

e-mail (main): [wim.verhagen@rws.nl](mailto:wim.verhagen@rws.nl)

Netherlands Coast Guard

Mr. Jan RICKEN

Kustwachtcentrum Gebouw MHKC

Nieuwe Haven

Postbus 10000 1780 CA den Helder

The Netherlands

Phone +31 223 658 315

Fax +31 223 658 303

Mobile phone: +31 61 321 75 49

e-mail (main): [jan.ricken@kustwacht.nl](mailto:jan.ricken@kustwacht.nl)

Norway Norwegian Coastal Administration

Mr. Bjoern Erik KROSNESS

Postboks 1502

NO-6025 Aalesund

Norway

Phone +47 33 03 48 08

Fax + 47 70 23 10 08

Mobile phone: +47 90 77 24 94

e-mail (main): [bekrosness@kystverket.no](mailto:bekrosness@kystverket.no)

e-mail (alternative): [bjo-kros@online.no](mailto:bjo-kros@online.no)

Oman AMNAS

Sultanate of

Mr Khalil AL BALUSHI

General Manager

P.O. Box 1677

CPO Seeb, PC 111

Oman, Sultanate of

Phone +968 24510 283

Fax +968 24510 430

Mobile phone: +968 99799 333

e-mail (main): [khalil@amnas-oman.com](mailto:khalil@amnas-oman.com)

Poland Urzad Morski w Gdyni (Maritime Office)

Mr. Marek LEDOCHOWSKI

ul. Chrzanowskiego 10

81-338 Gdynia

Poland

Phone +48 58 620 63 56

Fax +48 58 620 19 36

Mobile phone: +48 601 162 950

e-mail (main): [marek.ledochowski@umgdy.gov.pl](mailto:marek.ledochowski@umgdy.gov.pl)

e-mail (alternative): [marled@umgdy.gov.pl](mailto:marled@umgdy.gov.pl)

Portugal Direcçao de Farois

Mr. Arlindo SANTOS

Estrada Marginal

2770-210 Paço de Arcos

Portugal

Phone +351 21 44 61 660

Fax +351 21 44 10 193

Mobile phone:

e-mail (main): [dirfarois@sapo.pt](mailto:dirfarois@sapo.pt)

e-mail (alternative): [arlindo.ferreira.santos@marinha.pt](mailto:arlindo.ferreira.santos@marinha.pt)

Country

Portugal Direcçao de Farois

Mr Jorge TELES

Estrada Marginal

2720-210 Paço de Arcos

Portugal

Phone +351 21 446 1666

Fax

Mobile phone: +351 9166 30658

e-mail (main): [santos.teles@marinha.pt](mailto:santos.teles@marinha.pt)

Portugal Instituto Hidrografico

LCdr. Victor Fernando PLACIDO DA CONCEICAO

Rua das Trinas, 49

1249-093 Lisboa

Portugal

Phone +351 210 943 084

Fax +351 210 943 299

Mobile phone: +351 914 814 417

e-mail (main): [placido.conceicao@hidrografico.pt](mailto:placido.conceicao@hidrografico.pt)

e-mail (alternative): [placido.conceicao@marinha.pt](mailto:placido.conceicao@marinha.pt)

Scotland Northern Lighthouse Board

Captain Phil DAY

84 George Street

Edinburgh EH2 3DA

Scotland

Phone +44 131 473 3190

Fax +44 131 226 3615

Mobile phone: +44 7785 300 366

e-mail (main): [phild@nlb.org.uk](mailto:phild@nlb.org.uk)

e-mail (alternative):

South Africa Lighthouse Services TRANSNET, National Ports Authority of South Africa

Mr. Kribashin COOPOO

P. O. Box 50491

Waterfront, Cape Town

8002

South Africa

Phone + 27 21 449 5171

Fax + 27 21 449 36 63

Mobile phone: +27 83 258 6049

e-mail (main): [kribashin.coopoo@transnet.net](mailto:kribashin.coopoo@transnet.net)

Sweden Swedish Transport Agency

Mr Mats HÖRSTRÖM

O. Promenaden 7

Box 653

601 15 Norrköping

Sweden

Phone +46 771 503 503

Fax

Mobile phone: +46 734 32 12 85

e-mail (main): [mats.horstrom@transportstyrelsen.se](mailto:mats.horstrom@transportstyrelsen.se)

e-mail (alternative): [sjofart@transportstyrelsen.se](mailto:sjofart@transportstyrelsen.se)

Swedish Transport Agency

Mr Johan PETTERSSON

Ostra Promenaden 7

Box 653

S-601 15 Norrköping

Sweden

Phone +46 11 191382

Fax

Mobile phone: +46 709 198682

e-mail (main): [johan.pettersson@transportstyrelsen.se](mailto:johan.pettersson@transportstyrelsen.se)

UK General Lighthouse Authorities, R&RNAV

Mr Martin BRANSBY

The Quay

Harwich

Essex

UK

Phone +44 (0)1255 245 042

Fax

Mobile phone: +44 (0)7770 265 652

e-mail (main): [martin.bransby@gla-rrnav.org](mailto:martin.bransby@gla-rrnav.org)

General Lighthouse Authorities, R & RNAV

Mr Malcolm NICHOLSON

The Quay

Harwich, Essex, CO12 3JW

UK

Phone +44 1255 245 143

Fax

Mobile phone: +44 7768 50 55 79

e-mail (main): [obert.nicholson@gla-rrnav.org](mailto:)

Pharos Marine Ltd.

Mr. Owen JAMES

Steyning Way

Hounslow, Middlesex

TW4 6DL

UK

Phone +44 20 8538 1115

Fax +44 20 8577 4170

Mobile phone: +44 7767785794

e-mail (main): [ojames@pharosmarine.com](mailto:ojames@pharosmarine.com)

Tideland Signal Ltd.

Cdr. John AINGER, AFRIN, MIN, RN

Kendal House / Postboks 302

Burgess Hill / 5751 Odda

Sussex

UK / Norway

Phone +44 1444 872 240

Fax

Mobile phone:

e-mail (main): [ainger@online.no](mailto:ainger@online.no)

e-mail (alternative): [pburford@tidelandsignal.ltd.uk](mailto:pburford@tidelandsignal.ltd.uk)

Tideland Signal UK

Mr. Ian BURGESS

Unit B, Kendal House

Victoria Way

Burgess Hill

West Sussex RW15 9NF

UK

Phone +44 1444 87 22 40

Fax +44 1444 87 22 41

Mobile phone: +44 7799646445

e-mail (main): [iburgess@tidelandsignal.ltd.uk](mailto:iburgess@tidelandsignal.ltd.uk)

UK Trinity House Lighthouse Service

Capt. Roger BARKER

Tower Hill

London EC3N 4DH

UK

Phone +44 207 481 69 17

Fax +44 207 480 76 62

Mobile phone: +44 7785 111 519

e-mail (main): [roger.barker@thls.org](mailto:roger.barker@thls.org)

Ukraine SHS of Ukraine

Mrs Alla MIAGKOVA

23 Gagarina Avenue

Kyiv 02660

Ukraine

Phone +38 044 296 6040

Fax +380 44 292 1217

Mobile phone: +380 503 440108

e-mail (main): [miagkova.a@hdro.gov.ua](mailto:miagkova.a@hdro.gov.ua)

e-mail (alternative): [miagkova@yahoo.com](mailto:miagkova@yahoo.com)

SHS of Ukraine

Mr Dmytro PADAKIN

23 Gagarina Avenue

Kyiv 02660

Ukraine

Phone +380 44 2966040

Fax +380 44 2921217

Mobile phone: +380 50 4696501

e-mail (main): [office@hydro.gov.ua](mailto:office@hydro.gov.ua)

e-mail (alternative): [padakin@yahoo.ru](mailto:padakin@yahoo.ru)

USA US Coast Guard

Cdr. Greg TLAPA

2100 2nd Street SW

Washington DC 22101

USA

Phone +1 202 372 1546

Fax

Mobile phone:

e-mail (main): [obert.b.tlapa@uscg.mil](mailto:)

US Coast Guard

Mr Bob TRAINOR

2100 Second Street SW

Washington DC

United States

Phone +1 202 372 1550

Fax

Mobile phone:

e-mail (main): [obert.m.trainor@uscg.mil](mailto:)

e-mail (alternative): [rctrainor@frontiernet.net](mailto:rctrainor@frontiernet.net)

Vietnam Vietnam Maritime Safety South

Mr. Minh Thuan TRAN

3 Thang 2 Str – Ward 8

Vungtan City

Vietnam

Phone +84 64 35 74 139

Fax +84 643 858 312

Mobile phone:

e-mail (main): [minhthuan.tran@vms-south.vn](mailto:minhthuan.tran@vms-south.vn)

e-mail (alternative): [thuanbao2@yahoo.com](mailto:thuanbao2@yahoo.com)

Vietnam Maritime Safety North

Mr Van Quyet LE

282 Da Nang Str.

Hai Phong City

Vietnam

Phone +84 3 13550 762

Fax +84 3 13550 792

Mobile phone: +84 913 560 755

e-mail (main): [vms\_office@hn.vnn.vn](mailto:vms_office@hn.vnn.vn)

e-mail (alternative): [msc1@vnn.vn](mailto:msc1@vnn.vn)

Vietnam Maritime Safety North East

Mr Trung Kien DONG

151 Le Lai Street

Haiphong City

Vietnam

Phone +84 913 528 166

Fax +84 31 3 827 309

Mobile phone:

e-mail (main): [trungkien\_dong@yahoo.com](mailto:trungkien_dong@yahoo.com)

Vietnam Maritime Safety South

Mr Van Quang PHAM

10-3 Thang 2 Str – Ward 8

Vung Tan City

Vietnam

Phone +84 643 574 139

Fax +84 643 858 312

Mobile phone:

e-mail (main):

1. Working Group Participants
2. Navigational Requirements

|  |  |  |
| --- | --- | --- |
|  | Name | Organisation / Country |
|  | Roger Barker (Chairman) | THLS / England |
|  | Greg Tlapa (Vice Chairman) | USCG / USA |
|  | John Ainger | Tideland Signal Ltd. / UK |
|  | Kalil Al Balushi | AMNAS / Oman |
|  | Jakob Bang | DaMSA / Denmark |
|  | Jinzhu Chai | China MSA |
|  | Yong Hun Cho | MLTM / Republic of Korea |
|  | Seung Gi Gug | KMU / Republic of Korea |
|  | Mats Höström | STA/ Sweden |
|  | Tamotsu Ikeda | JANA / Japan |
|  | Owen James | Pharos Marine Ltd / UK |
|  | Raven Kurtz | Federal Waterways & Shipping Agency / Germany |
|  | Marek Ledochowski | Maritime Office Gdynia / Poland |
|  | Philippe Lijour | CETMEF / France |
|  | Robert McCabe | CIL / Ireland |
|  | Simiao Antonio Munguambe | INAHINA / Mozambique |
|  | Hideki Noguchi | JCG / Japan |
|  | Victor Placido da Conceicao | Instituto Hidrografico / Portugal |
|  | Christian Rissone | ITU – ANFR / France |
|  | Jorge Teles | Direcção de Faróis / Portugal |

1. Continuous Improvement

|  |  |  |
| --- | --- | --- |
|  | **Name** | **Organisation / Country** |
|  | Gerry Brine (Chairman) | AMSA / Australia |
|  | Malcolm Nicholson (Vice Chairman) | THLS / England |
|  | Chong Hwan Bang | Daeeke Marine Corporation / Republic of Korea |
|  | Martin Bransby | GLA R&RNAV / UK |
|  | Kiru Coopoo | Transnet National Ports Authority / South Africa |
|  | Ian Burgess | Tideland Signal Ltd. / UK |
|  | Trung Kien Dong | Vietnam Maritime Safety North |
|  | Hendrik Eusterbarkey | Federal Waterways & Shipping Agency / Germany |
|  | John Festarini | CCG / Canad |
|  | Jean Luc Fontan | DAM / France |
|  | Peter S Jensen | Force Technology / Denmark |
|  | Min Su Jeon | Korean Association of AtoN |
|  | Kang On Kim | MLTM / Republic of Korea |
|  | Bjorn Erik Krosness | NCA / Norway |
|  | Van Quyet Le | Vietnam Maritime Safety North |
|  | Johan Petterson | STA / Sweden |
|  | Van Quang Pham | Vietnam Maritime Safety South |
|  | Arlindo Santos | Portuguese Lighthouse Authority |
|  | Peter K Sorensen | Force Technology / Denmark |
|  | Cathrine Steenberg | Force Technology / Denmark |
|  | Robert Trainor | USCG / USA |
|  | Minh Thuan Tran | Vietnam Maritime Safety South |
|  | Hiroshi Tsuchizaki | JCG / Japan |
|  | Wim Verhagen | Ministry of Infrastructure & Transport / the Netherlands |
|  | Yang Wenzhi | China MSA |

1. List of input papers

All papers are posted on the FTP server

Items highlighted are not on the Committee website.

1. Approval of the agenda

|  |  |  |  |
| --- | --- | --- | --- |
| Number | Title / Author (if required) | Presented by: | Posting |
| ANM16/1/1 | Agenda | Phil Day (PD) | 1 |
| ANM16/1/2 | Programme for week (to be issued after the Chairman’s Meeting) | PD |  |

1. Review of action items from last meeting

|  |  |  |  |
| --- | --- | --- | --- |
| Number | Title / Author (if required) | Presented by: | Posting |
| ANM16/2/1 | Action Items from ANM15 | PD/TCM | 1 |

1. Review of input papers

|  |  |  |  |
| --- | --- | --- | --- |
| Number | Title / Author (if required) | Presented by: | Posting |
| ANM16/3/1 rev1 | List of Input Papers (to be issued after the Chairman’s Meeting) | PD/TCM |  |

1. Reports from other bodies

|  |  |  |  |
| --- | --- | --- | --- |
| Number | Title / Author (if required) | Presented by: | Posting |
| ANM16/4/1 | IALA COUNCIL 50th Session | PD |  |
| ANM16/4/2 | MSC88 report | PD |  |
| ANM16/4/3 | PAP20 report | PD | 1 |
| ANM16/4/4 | IALA Strategy monitoring – October 2010 | PD | 1 |
| ANM16/4/5 | Strategy status of the ANM Committee after ANM15 | PD | 1 |

1. Reports from rapporteurs

| Number | Title / Author (if required) | Rapporteur | Posting |
| --- | --- | --- | --- |
| ANM16/5/ | Risk Management and Risk Models (M1) | Jakob Bang |  |
| ANM16/5/ | IALA Questionnaire (M2) | Jorge Teles |  |
| ANM16/5/ | Offshore manmade structures (OREI) (M3) | Raven Kurtz |  |
| ANM16/5/1  ANM16/5/1A | Development of e-Navigation within AtoN Authorities (M4)  ANM16/5/1A is an Excel file attachment | Gerry Brine |  |
| ANM16/5/ | Development of e-Navigation for AtoN users (M5) | Rob McCabe |  |
| ANM16/5 | Development of mobile marine products for AtoN users (M6) | Marek Ledochowski |  |

1. Presentations
2. Establish Working Groups
3. Working Group 1 – Navigational Requirements
   1. Produce guidance for Aids to Navigation Authorities on the user requirements and practical applications of e-Navigation, from berth to berth (Task 1)
   2. Develop Recommendations on AtoN standards and navigational requirements in risk control measures included in e-Navigation (this would include a revision (or a replacement) of the existing Recommendations and Guideline on risk management). (Task 2\*)
   3. Develop guidance on the application of maritime surface picture (e.g. AIS traffic data) for analysis in risk assessment and the provision of Aids to Navigation (Task 3\*)
   4. Develop guidance for AtoN Authorities in the use of Virtual Aids to Navigation assessing their use and contribution to safety of navigation (Task 4\*)
   5. Consider the IMO Wreck Removal Convention and its implications for AtoN Authorities and States. Develop a Recommendation for IALA Members including guidance on marking ‘floating wreckage’, taking into account existing IALA guidance (Task 5\*)
   6. Review IALA Recommendation O-139 on the Marking of Man-made Off-shore structures (Task 12\*)

|  |  |  |  |
| --- | --- | --- | --- |
| Number | Title / Author (if required) | WG | Posting |
| ANM16/8/1 | Cover note for Development of policy and new symbols for AIS AtoN – Japan – NAV57 | 1 | 2 |
| ANM16/8/1A | Development of policy and new symbols for AIS AtoN – Japan – NAV57 | 1 | 2 |
| ANM16/8/2 | Revision to Guideline 1033. Replaced by ANM16/8/3 | 1 | 2 |
| ANM16/8/3 | Revision to Guideline 1033 rev1 – the Provision of AtoN for different Classes of Vessels, including High Speed Craft | 2 | 3 |
| ANM16/8/4 | PIANC MMX Paper Channel AtoN Design\_version3b | 2 | 4 |
| ANM16/8/5 | Liaison note from e-NAV9 on ePelorus | 1 | 5 |
| ANM16/8/6 | Draft Recommendation O-143 – Virtual AtoN | 1 | Late |
| ANM16/8/7 | Liaison note from LAP – Wreck removal convention | 1 | Late |

1. Working Group 2 – Continuous Improvement
   1. Co-ordinate a review of the IALA NAVGUIDE (Task 6\*)
   2. Develop guidance on issues derived from revision of the MBS, such as the clarification of auxiliary marks, including examples of those debated during the consultation and drafting process (Task 7\*)
   3. Produce Quality Management and Training guidance for AtoN services and service providers in an e-Navigation environment, in support of the IALA World-Wide Academy (Task 8\*)
   4. Develop guidance for AtoN Authorities on level of service and changing user requirement; such as need for landfall lights and unlit AtoN (Task 9\*)
   5. Develop and update of IALA Recommendations O-113 on the Marking of fixed bridges over navigable waters, also considering the marking of overhead power lines (Task 10\*)
   6. Review IALA Recommendation O-104 of 1998, for off station Signals for Major Floating Aids to Navigation and extended to considerations of Buoys of Primary Navigation Significance (BPNS) and so called Superbuoys (Task 11\*)
   7. Co-operate with the other committees in the project for AtoN Status / information exchange and associated metadata (Task 13\*)
   8. Examine the use of Audible Signals as aids to navigation and develop an IALA Guideline on their future – in conjunction with the EEP Committee (Task 14\*)
   9. Review ANM Recommendations & Guidelines for updating (Task16\*)
   10. Update IALA Guideline 1058 on the use of simulation as a tool for waterway design and AtoN planning (Task17\*)
   11. Develop a supplementary Guideline to 1058 providing technical detail for simulator providers and procurers of simulation to ensure appropriate components and quality for AtoN features (Task 18\*)
   12. Review IALA Recommendation O-130 on Categorisation and Availability Objectives for Short Range Aids to Navigation (Task 19\*)

|  |  |  |  |
| --- | --- | --- | --- |
| Number | Title / Author (if required) | WG | Posting |
| ANM16/9/1 | Review and amendment of IALA Guideline 1058 | 2 | 1 |
| ANM16/9/2 | Task Working Group on Recommendation O-113 | 2 | 1 |
| ANM16/9/3 | Use of AtoN in the Design of Fairways and Waterways – review (ver2) | 2 | 1 |
| ANM16/9/4 | Netherlands comments on revision of Guideline 1058 | 2 | 2 |
| ANM16/9/5 | Proposal regarding type of AtoN code for AIS AtoN on Emergency Wreck Mark | 2 | 3 |
| ANM16/9/6 | Amendment of IALA Rec. E-110 related to EWMB | 2 | Late |
| ANM16/9/7 | Proposal for marking and lighting of windturbines of more than 150m in height | 1 | Late |
| ANM16/9/8 | Ambiguous Daymarks and Objects Conflicting with AtoN Daymarks | 2 | Late |
| ANM16/9/9 | Liaison Note from EEP on Availability of synchronised and sequenced buoy lighting systems | 2 | Late |
| ANM16/9/10 rev1 | Liaison note from EEP on Simulation in the Design of AtoN | 2 | Late |

1. Develop a Recommendation for Marine Spatial Planning with emphasis on Navigational safety (Task 15\*)

|  |  |  |  |
| --- | --- | --- | --- |
| Number | Title / Author (if required) | WG | Posting |
| ANM16/10/1 |  |  |  |

1. Future Work Programme

|  |  |  |  |
| --- | --- | --- | --- |
| Number | Title / Author (if required) | WG | Posting |
| ANM16/11/1 |  |  |  |

1. Review of output and working papers
2. Any Other Business
   1. Terms of Reference
   2. Workshop & seminar programme (2010 – 2014)
   3. Use of AtoN in the Design of Fairways and Waterways
   4. Data Structures

|  |  |  |  |
| --- | --- | --- | --- |
| Number | Title / Author (if required) | WG | Posting |
| ANM16/13/1 | WG ToR | All WG Chairs | 1 |
| ANM16/13/2 | Proposed Workshops & Seminars 2010-2014, ANM15 comments | All | 1 |
| ANM16/13/3 | Note from e-NAV Vice Chair to all Committees about Data Structures | PD/MS | 2 |
| ANM16/13/3A | IHO GI Registry + IALA Domain + IMO Flipchart drawing | PD/MS | 2 |
| ANM16/13/4 | Information on new draft of IALA Guideline No. 1078 Use of Aids to Navigation in the Design of Fairways and  Waterways | 2 | 3 |
| ANM16/13/5 | Draft revised IALA Guideline 1078 | 2 | 4 |
| ANM16/13/6 | Liaison note from VTS re Data Structures | 2 | 4 |
| ANM16/13/7 | e-Navigation Architecture ‘Picture Book’ Information Paper on e-NAV-140 | 2 | Late |
| ANM16/13/8 | Resilient Position-Fixing – e-NAV9/8/6 | 1 | Late |
| ANM16/13/9 | e-NAV FAQ on level of traditional AtoNs –  e-NAV9/output/16 | 1 | Late |
| ANM16/13/10 | Cover note for ANM16/13/10A, ANM16/13/10B & ANM16/13/10C | 1 | Late |
| ANM16/13/10A | Draft input to IMO NAV 57 on Resilient PNT from e-NAV9 | 1 | Late |
| ANM16/13/10B | Alternative positioning – NAV57 Information paper | 1 | Late |
| ANM16/13/10C | Draft revised IALA input to NAV 57 on Resilient PNT | 1 | Late |
| ANM16/13/11 | Comparable Range of Daymarks and Lights | 2 | Late |
| ANM16/13/12 | RAL Colours for Daymarks Changed to ANM16/INF/6 | 2 | Late |

**Information Papers**

|  |  |  |
| --- | --- | --- |
| **Number** | **Title / Author (if required)** | **Posting** |
| ANM16/INF/1 | Revised Rules of Procedure for IALA Committees (2010-2014) | 2 |
| ANM16/INF/2 | IALA Documentation procedures and quality control | 2 |
| ANM16/INF/3 | Meeting dates 2010 – 2014, to 10December 2010 | 2 |
| ANM16/INF/4 | USCG AtoN Strategic Plan | 2 |
| ANM16/INF/5 | Operating anomalies identified within ECDIS – Draft submission to MSC89 | 2 |
| ANM16/INF/6 | RAL Colours for Daymarks | Late |

1. Date and venue of next meeting
2. Review of session report
3. List of Output and Working Papers

Output documents are submitted for review/action by a body other than the Committee initiating the document.

|  |  |  |
| --- | --- | --- |
| **Number** | **Title** | **Status** |
| ANM16/output/1 | Draft Report | To Council to note |
| ANM16/output/2 | Draft Guideline on the Procedure for the Authorisation of AIS AtoN | To Council for approval |
| ANM16/output/3 | Risk Management seminar proposal | To Council for approval |
| ANM16/output/4 | Marine Spatial Planning workshop proposal | To Council for approval |
| ANM16/output/5 | Draft revised IALA Guideline 1078 on the Use of Aids to Navigation in the Design of Fairways | To Council for approval |
| ANM16/output/6 | Liaison Note to EEP on the availability of synchronised and sequenced buoy lighting systems | To EEP17 |
| ANM16/output/7 | Draft revised IALA O-130 on the Categorisation and Availability Objectives for Short Range Aids to Navigation | To Council for approval |
| ANM16/output/8 | Liaison Note to all Committees on the NAVGUIDE | To VTS33, e-NAV10, EEP17 & Secretariat |
| ANM16/output/9 | Liaison note to EEP16 – draft simulation guideline | To EEP17 |
| ANM16/output/10 | Letter to Netherlands – Review and amendment of IALA Guideline 1058 | To Secretary-General for approval and signature |
| ANM16/output/11 | ANM response to Contribution of the Netherlands – Annex to ANM16/output/10 | To Secretary-General for approval |
| ANM16/output/12 | Draft revised IALA Guideline 1058 on the Use of Simulation as a Tool for Waterway Design and AtoN Planning | To Council for approval |
| ANM16/output/13 | NAVGUIDE Action Plan | To VTS33, e-NAV10, EEP17 & Secretariat |
| ANM16/output/14 | NAVGUIDE Timetable | To VTS33, e-NAV10, EEP17 & Secretariat |
| ANM16/output/15 | Liaison Note to EEP – E110 | To EEP17 |
| ANM16/output/16 | Information Paper to Council – Revoke O-133 | To Council for approval |
| ANM16/output/17 | Working Group Terms of Reference | To Secretariat for posting to FTP server |
| ANM16/output/18 | Working draft supplementary Guideline to Guideline 1058 | To EEP17 |
| ANM16/output/19 | USCG AtoN Strategic Plan | To ANM Committee members |

Working papers are documents that will remain within the Committee for further review.

|  |  |  |
| --- | --- | --- |
| Number | Title | Status |
| ANM16/WG1/WP1 | Draft Guideline on User Requirements and Practical Applications of e-Navigation from Berth to Berth | To ANM17 |
| ANM16/WG1/WP2 | Draft Guideline on The application of maritime surface picture for analysis in risk assessment and the provision of Aids to Navigation | To ANM17 |
| ANM16/WG1/WP3 | Draft revised Guideline 1081 on Virtual Aids to Navigation | To ANM17 |
| ANM16/WG1/WP4 | Draft revised Recommendation O-143 on Virtual Aids to Navigation | To ANM17 |
| ANM16/WG1/WP5 | Draft Recommendation on the marking of floating wreckage | To ANM17 |
| ANM16/WG1/WP6 | Draft revised Recommendation O-139 | To ANM17 |
|  |  |  |
| ANM16/WG2/WP1 | Draft revised Recommendation O-113 | To ANM17 |
| ANM16/WG2/WP2 | Draft revised Recommendation O-104 | To ANM17 |
| ANM16/WG2/WP3 | Scoping document for Task 14 | To ANM17 |
| ANM16/WG2/WP4 | Schedule for reviewing ANM Recommendations & Guidelines | To ANM17 |
| ANM16/WG2/WP5 | Draft supplementary Guideline to Guideline 1058 | To ANM17 |
|  |  |  |
| ANM16/Chair/WP1 | Questionnaire on Marine Spatial Planning | To ANM17 |

1. Action Items

Action Items for Secretariat

1. [The Secretariat is requested to distribute the 2010 Annual Questionnaire, requesting return in time of assessment at ANM17. 7](#_Toc290041701)
2. [The Secretariat is requested to forward ANM16/WG1/WP1 to ANM17. 10](#_Toc290041702)
3. [The Secretariat is requested to forward ANM16/WG1/WP2 to ANM17. 11](#_Toc290041703)
4. [The Secretariat is requested to draw to the attention of the Council the request to reword Task description 4 to read ‘Review and update’ vice ‘Develop’. 11](#_Toc290041704)
5. [The Secretariat is requested to forward ANM16/WG1/WP5 to ANM17. 12](#_Toc290041705)
6. [The Secretariat is requested to forward the draft revision of Recommendation O-139 (ANM16/WG1/WP6) to ANM17. 13](#_Toc290041706)
7. [The Secretariat is requested to forward ANM16/8/3 to ANM17. 13](#_Toc290041707)
8. [The Secretariat is requested to forward the liaison note (ANM16/output/8), the action plan (ANM16/output/13) and the timetable (ANM16/output/14) for the review of the NAVGUIDE to all other Committees and the Secretariat, for their action. 14](#_Toc290041708)
9. [The Secretariat is requested to forward the liaison note on a suggested amendment to E-110 (ANM16/output/15) to the EEP Committee for its consideration and comment as appropriate. 15](#_Toc290041709)
10. [The Secretariat is requested to forward the information paper regarding the revoking of IALA recommendation O-133 (ANM16/output/16) to the IALA Council for its approval. 15](#_Toc290041710)
11. [The Secretariat is requested to provide an electronic copy of the MBS Guidelines as an input paper to ANM17. 15](#_Toc290041711)
12. [The Secretariat is requested to draw to the attention of the Council the request to amend the title of the task from ‘Develop guidance …..’ to Review guidance.’ 15](#_Toc290041712)
13. [The Secretariat is requested to forward Recommendation O-113 (ANM16/WG2/WP1) to ANM17. 16](#_Toc290041713)
14. [The Secretariat is requested to forward the draft guideline (ANM16/WG2/WP2) to ANM17 16](#_Toc290041714)
15. [The Secretariat is requested to forward (ANM16/WG2/WP3) to ANM 17. 16](#_Toc290041715)
16. [The Secretariat is requested to forward (ANM16/WG2/WP4) to ANM 17. 17](#_Toc290041716)
17. [The Secretariat is requested to forward a letter from the Secretary-General to the Netherlands (ANM16/output/10) thanking them for their comments and questions and attaching ANM’s table of responses (ANM16/output/11) as an Annex. 17](#_Toc290041717)
18. [The Secretariat is requested to forward the draft guideline (ANM16/output/12) to Council for approval. 17](#_Toc290041718)
19. [The Secretariat is requested to forward the liaison note on a supplementary Guideline to Guideline 1058 (ANM16/output/9) and the working draft guideline (ANM16/output/18) to EEP17. 18](#_Toc290041719)
20. [The Secretariat is requested to forward the draft supplementary Guideline to Guideline 1058 (ANM16/WG2/WP5) to ANM17. 18](#_Toc290041720)
21. [The Secretariat is requested to forward the liaison note on the availability of synchronised and sequenced buoy lighting systems (ANM16/output/6) to EEP 17. 18](#_Toc290041721)
22. [The Secretariat is requested to forward the revised Recommendation O-130 (ANM16/output/7) to Council for approval. 18](#_Toc290041722)
23. [The Secretariat is requested to forward the draft guideline (ANM16/output/5) to Council for approval. 19](#_Toc290041723)
24. [The Secretariat is requested to forward ANM16/13/3, ANM16/13/7 & ANM16/13/11 to ANM17. 19](#_Toc290041724)
25. [The Secretariat is requested to forward the summary of the USCG AtoN Strategic Plan (ANM16/output/19) to ANM Committee members. 19](#_Toc290041725)
26. [When available, the Secretariat is requested to forward the Marine Spatial Planning questionnaire to the IALA membership. 19](#_Toc290041726)
27. [The Secretariat is requested to post the WG ToR (ANM16/output/17) on the ftp server. 20](#_Toc290041727)
28. [The Secretariat is requested to forward the Risk Management seminar proposal (ANM16/output/3) to the IALA Council for approval. 20](#_Toc290041728)
29. [The Secretariat is requested to forward the Marine Spatial Planning workshop proposal (ANM16/output/4) to the IALA Council for approval. 20](#_Toc290041729)
30. [The Secretariat is requested to draw the attention of PAP to the proposed changes in dates and venues for ANM19. 20](#_Toc290041730)
31. [The Secretariat is requested to distribute the 2010 Annual Questionnaire to IALA members and ANM Committee members by 30 April 2011. 21](#_Toc290041731)
32. [The Secretariat is requested to consider the provision of previous results of Annual Questionnaires on the IALA Committee website. 21](#_Toc290041732)
33. [The Secretariat is requested to forward the draft Guideline on Authorisation of AIS AtoN (ANM16/output/2) to the IALA Council for approval. 21](#_Toc290041733)
34. [The Secretariat is requested to forward the report of ANM16 (ANM16/output/1) to the Council, to note. 21](#_Toc290041734)

Action Items for Members

1. [The Committee is requested to consider whether the removal of the content on superbuoys in the IALA Dictionary entry for a Lanby would be appropriate and consider the issue in the revision of IALA Recommendation O-104. 6](#_Toc290041735)
2. [When available, Raven Kurtz is requested to provide an English version of a German recommendation on the building and marking of Off-shore windfarms with AtoN. 6](#_Toc290041736)
3. [DaMSA is requested to investigate the difficulties experienced in loading AIS data into the commercial version of IWRAP Mk2 and report to ANM17. 7](#_Toc290041737)
4. [Committee members are requested to provide relevant information to rapporteurs of monitoring items two months prior to each meeting of the ANM Committee. 9](#_Toc290041738)
5. [Marek Ledochowski is requested to include ePelorus in his rapporteur item. 13](#_Toc290041739)
6. [WG2 is requested to canvass their organisations and stakeholders and provide input inter-sessionally in time for consideration at ANM17. 15](#_Toc290041740)
7. [John Festarini is requested to provide a presentation on the Canadian methodology in respect to Guideline 1004. 15](#_Toc290041741)
8. [ANM members are requested to review the draft guideline (ANM16/WG2/WP4) inter-sessionally and provide comments in time for consideration at ANM17. 18](#_Toc290041742)
9. [The Chairman and Vice Chairman of the ANM Committee are requested to progress the development of the Marine Spatial Planning questionnaire. 19](#_Toc290041743)
10. [The Committee are requested to consider potential items for the 2014 – 2018 before ANM17. 19](#_Toc290041744)
11. [ANM Committee members are requested to monitor the processing of the questionnaire within their administrations / organisations. 21](#_Toc290041745)
12. Revision of the ANM Work Programme

Approved by the IALA Council – December 2009

(Changes made/suggested at ANM16 are highlighted in yellow)

The ANM Committee deals with high level management aspects of AtoN. In the work of the Committee, the following general aspects are to be taken into consideration:

* Strategic focus for IALA;
* Harmonized use of Definitions and Terms; and
* Concepts associated with Risk Assessment / Management.

Work Programme 2010 – 2014

| Task | Estimated number of sessions | Comments | Strategy element(s) |
| --- | --- | --- | --- |
| 1. Produce guidance for Aids to Navigation Authorities on the user requirements and practical applications of e-Navigation, from berth to berth. | 1 - 7 | *ANM take the lead.*  *Together with e-NAV & VTS Committees & derived from IMO e-Navigation Strategy.* | *5.6, 5.7, 13.6* |
| 1. Develop Recommendations on AtoN standards and navigational requirements in risk control measures included in e-Navigation (this would include a revision (or a replacement) of the existing Recommendations and Guideline on risk management (1018)). | 1 - 7 | *ANM take the lead.*  *Together with the e-NAV, EEP & VTS Committees.* | *5.7, 8.2, 10.7* |
| 1. Develop guidance on the application of maritime surface picture (e.g. AIS traffic data) for analysis in risk assessment and the provision of Aids to Navigation. | 2 – 5 | *ANM take the lead.*  *In conjunction with the e-NAV & VTS Committee.* | *8.2, 10.7, 13.5* |
| 1. Review and update guidance for AtoN Authorities, including Guideline 1062, in the use of Virtual Aids to Navigation assessing their use and contribution to safety of navigation. | 1 - 4 | *In collaboration with the other committees and the IHO.* | *5.5* |
| 1. Consider the IMO Wreck Removal Convention and its implications for AtoN Authorities and States. Develop a Recommendation for IALA Members including guidance on marking ‘floating wreckage’, taking into account existing IALA guidance. | 1 – 3 | *Together with EEP and e-NAV Committees & LAP* | *5.5* |
| 1. Co-ordinate a limited review of the IALA NAVGUIDE to incorporate amended Guidelines and Recommendations and other necessary updates. | 1 – 7 | *In conjunction with other IALA Committees / ad hoc groups.* |  |
| 1. Develop guidance on issues derived from revision of the MBS, such as the clarification of auxiliary marks, including examples of those debated during the consultation and drafting process. | 4 – 6 | To include the principles of marking harbours / ports, e.g.:   1. Breakwater / Entrance lights, including:    * when the one breakwater / entrance light may not be opposite the other, but extend further out to sea (as a protruding point)    * when should a breakwater light be red / green and when can it be a white light    * a long breakwater needs to be marked halfway 2. Quay / jetty lights, including when lights are required to be on both sides of a jetty 3. Other points of interest 4. Bridge markings 5. Port Traffic Signals 6. Principles of marking inland waterways with a combination of fixed and floating AtoN. |  |
| 1. Produce Quality Management and Training guidance for AtoN services and service providers in an e-Navigation environment, in support of the IALA World-Wide Academy. Review IALA Guideline 1052. | 3 – 5 | *In conjunction with the other Committees.* | *5.6, 7.1, 10.8, 13.6*  *18.1* |
| 1. Review and update guidance for AtoN Authorities on level of service and changing user requirement; such as need for landfall lights and unlit AtoN. Review IALA Guideline 1004. | 2 – 5 | *In conjunction with the EEP Committee.* | *5.4, 5.6, 5.7, 13.6* |
| 1. Develop and update IALA Recommendation O-113 on the Marking of fixed bridges over navigable waters, also considering the marking of overhead power lines. | 1 – 3 | *In conjunction with the other Committees.* |  |
| 1. Review IALA Recommendation O-104 of 1998, for off station Signals for Major Floating Aids to Navigation and extended to considerations of Buoys of Primary Navigation Significance (BPNS) and so called Superbuoys. | 2 – 4 |  |  |
| 1. Review IALA Recommendation O-139 on the Marking of Man-made Off-shore structures.    1. Marking of off-shore renewable energy installations (OREI) and the minimum distance that OREIs can be positioned from a TSS and / or shipping route    2. Synchronisation of lights, sectoring of lights, marking & numbering of individual units within an OREI, exit marks etc. | 1 – 6 | *Recommendation O-139 was last revised in 2008, ANM recognises that this is a rapidly evolving issue in the competition for sea space and anticipates that the matter will need to be revisited. In conjunction with ICAO.* |  |
| 1. Co-operate with the other committees in the project for AtoN Status / information exchange and associated metadata. | 3 – 5 | *In conjunction with the other Committees and stakeholders*. *Lead is e-NAV.* | *13.3* |
| 1. Examine the use of Audible Signals as aids to navigation and develop an IALA Guideline on their future. | 2 – 4 | *Together with the EEP Committee.* |  |
| 1. Develop a Recommendation for Marine Spatial Planning with emphasis on Navigational safety. | 2-6 | *Current developments of off shore renewable energy on an unprecedented scale have highlighted that AtoN authorities often do not have an overriding say on the location of Construction at sea. Planning authorities often lack an understanding of navigational safety and shipping issues with emphasis on the natural environment. It is considered necessary to have a Recommendation that can be referred to by planning authorities to assist in correcting this issue.* | *New item from conference recommendation* |
| 1. Review ANM Recommendations & Guidelines for updating | 1-7 | *To ensure Recommendations & Guidelines remain current ANM will regularly review content.* |  |
| 1. Update IALA Guideline 1058 on the use of simulation as a tool for waterway design and AtoN planning | 1-2 | *Simulation is a fast developing method of cost effective planning/testing prior to AtoN implementation. It has great potential for current off shore renewable developments. The current Guideline needs updating to support the AtoN authority planning activity* |  |
| 1. Develop a supplementary Guideline to 1058 providing technical detail for simulator providers and procurers of simulation to ensure appropriate components and quality for AtoN features | 2-6 | *The supplementary Guideline is seen as providing a better understanding of the potential use of simulation in AtoN planning.* |  |
| 1. Review IALA Recommendation O-130 on Categorisation and Availability Objectives for Short Range Aids to Navigation | 2-4 | *Arising from EEP query about synchronised / sequenced light systems.* | *10.8* |

Monitoring Items

|  |  |  |  |
| --- | --- | --- | --- |
| Task | Duration | Comment | Strategy element(s) |
| M1 Risk Management and Risk Models | Continuous |  |  |
| M2 IALA Questionnaire | Annual |  |  |
| M3 Offshore manmade structures (OREI) | Continuous |  |  |
| M4 Development of e-Navigation within AtoN Authorities | Continuous | In conjunction with M5 |  |
| M5 Development of e-Navigation for AtoN users | Continuous | In conjunction with M4 |  |
| M6 Development of mobile marine products for AtoN users | Continuous | e.g. Apps, email alerts, charting solutions |  |

Deferred Items

|  |  |  |  |
| --- | --- | --- | --- |
| Task | No. of sessions | Comment | Strategy element(s) |
| D1 None at this time |  |  |  |

Aids to Navigation Management Committee Work Plan 2010 - 2014

| Task | Session | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 1. Produce guidance for Aids to Navigation Authorities on the user requirements and practical applications of e-Navigation, from berth to berth. | X | X | X | X | X | X | X |
| 1. Develop Recommendations on AtoN standards and navigational requirements in risk control measures included in e-Navigation (this would include a revision (or a replacement) of the existing Recommendations and Guideline on risk management). | X | X | X | X | X | X | X |
| 1. Develop guidance on the application of maritime surface picture (e.g. AIS traffic data) for analysis in risk assessment and the provision of Aids to Navigation. |  | X | X | X | X |  |  |
| 1. Review and update guidance for AtoN Authorities, including Guideline 1062, in the use of Virtual Aids to Navigation assessing their use and contribution to safety of navigation. | X | X | X | X |  |  |  |
| 1. Consider the IMO Wreck Removal Convention and its implications for AtoN Authorities and States. Develop a Recommendation for IALA Members including guidance on marking ‘floating wreckage’, taking into account existing IALA guidance. | X | X | X |  |  |  |  |
| 1. Co-ordinate a limited review of the IALA NAVGUIDE to incorporate amended guidelines and recommendations and other necessary updates. | X | X | X | X | X | X | X |
| 1. Develop guidance on issues derived from revision of the MBS, such as the clarification of auxiliary marks, including examples of those debated during the consultation and drafting process. |  |  |  | X | X | X |  |
| 1. Produce Quality Management and Training guidance for AtoN services and service providers in an e-Navigation environment, in support of the IALA World-Wide Academy. Review IALA Guideline 1052. |  |  | X | X | X |  |  |
| 1. Review and update guidance for AtoN Authorities on level of service and changing user requirement; such as need for landfall lights and unlit AtoN. Review IALA Guideline 1004. |  | X | X | X | X |  |  |
| 1. Develop and update IALA Recommendations O-113 on the Marking of fixed bridges over navigable waters, also considering the marking of overhead power lines. | X | X | X |  |  |  |  |
| 1. Review IALA Recommendation O-104 of 1998, for off station Signals for Major Floating Aids to Navigation and extended to considerations of Buoys of Primary Navigation Significance (BPNS) and so called Superbuoys. |  | X | X | X |  |  |  |
| 1. Review IALA Recommendation O-139 on the Marking of Man-made Off-shore structures.    1. Marking of off-shore renewable energy installations (OREI) and the minimum distance that OREIs can be positioned from a TSS and / or shipping route    2. Synchronisation of lights, sectoring of lights, marking & numbering of individual units within an OREI, exit marks etc. | X | X | X | X | X | X |  |
| 1. Co-operate with the other committees in the project for AtoN status / information exchange and associated metadata. |  |  | X | X | X |  |  |
| 1. Examine the use of Audible Signals as aids to navigation and develop an IALA Guideline on their future. |  | X | X | X |  |  |  |
| 1. Develop a Recommendation for Marine Spatial Planning with emphasis on navigational safety. |  | X | X | X | X | X |  |
| 1. Review ANM Recommendations & Guidelines for updating. | X | X | X | X | X | X | X |
| 1. Develop and update IALA Guideline 1058 on the use of simulation as a tool for waterway design and AtoN planning. | X | X |  |  |  |  |  |
| 1. Develop a supplementary Guideline to 1058 providing technical detail for simulator providers and procurers of simulation to ensure appropriate components and quality for Aton features. |  | X | X | X | X | X |  |
| 1. Review IALA Recommendation O-130 on Categorisation and Availability Objectives for Short Range Aids to Navigation. |  | X | X | X |  |  |  |

1. Text from presentation by Kim Kang On (6.1)
2. Thank you Chairman! Good morning everyone.

My name is Kangon Kim, Ministry of land transport and maritime affairs, Korea.

I would like to make a presentation on "Analysis of maritime accidents in Korea and a new countermeasure.

1. My presentation consists of Introduction, and Accidents analysis by categories, Accidents analysis by ship types, Mobile Telecommunication for prevention of sea accident and finally, come to conclusions.
2. In Korea, the maritime traffic volume has been continuously increased for last few decades with its rising leisure activities. This increased traffic brought increased accident's risk at the sea. So we analysed the maritime accidents during 1990-2009 and suggest a mobile telecommunication as a new countermeasure to prevent accidents.
3. Accidents were analysed by categories. Actually, a number of ships surveyed were decreased because ships have been getting bigger and bigger but the number of maritime accidents were increased because of more advents of small leisure ships at the coastal area.

The primary reason for the accidents was Engine damage and 2nd was collisions with other ships.

1. The most 7 frequent accidents were engine damage, collision, mistake of operation, stranding, fire/explosion, capsizing, sinking and etc. they accounted 90% of whole accidents.
2. Engine Damage was caused by un-maintained equipment or incorrect operation.
3. More specific reasons of engine damages are as followings:
   1. The engine manufacturers didn't provide sufficient guidance for monitoring the fatigue life of their engines;
   2. The maintenance for critical parts of the engines wasn't planned according to manufacturer recommendation, operating, maintaining and monitoring the K8E lubricating oil filter was inadequate;
   3. The standby filter wasn't checked to ensure that it was ready for use and the in-service K8E filters condition wasn't adequately monitored.
4. There were some researches to find out a resolution to reduce the engine damages as followings:
   1. Apply engineering principles for diagnosis and correction of machinery mal-functions, Distribute process control sys in engine monitoring sys, Statistical and spectral analysis for the faults of the system.
   2. Influence of machinery frequency response characteristics on signal transmission from damaged part.
5. Collision was normally caused by human error and propulsion sys fault. Collisions damage environment and cause financial loss. In these days, environmental damage is put on the first priority when we design waterways.
6. To reduce collisions, there were 2 important researches in 2008 by Chauvin and Lardjane, used numerical simulation of ship collisions with various simplifications and assumptions based upon general behaviour of collision. In 2009, Yagi, Humamoto studied Prediction of collision results with FE method.
7. Mistakes in operation can be reduced by practical education and training for seafarers.
8. The other reasons are stranding and fire/explosion, and
9. Capsizing and sinking.
10. As I mentioned before, small fishing vessels cause more accidents than bigger ships; about 70% of accidents were related on the fishing vessels in this decade.
11. Among fishing vessels, 80% of accidents were by ships under 100 tonnes.
12. We can say, this ratio is not only because of its human factor's but also its lack of navigational equipment. Such as AIS is not mandatory on-board equipment under 100 tonnes ships. So I would suggest adopting mobile telecommunications to solve this matter.
13. Mobile telecommunications can be a useful method to prevent accidents in the small ships.
14. It shows the equation to calculate the Distance to Closest Point of Approach (DCPA) and Time to Closest Point of Approach (TCPA).
15. Simulation of interlocking server & AIS and Marine traffic system application are on-going. A demonstration can be presented the next meeting.
16. In conclusion, we analysed the reasons and statistical data of the accidents on the sea and are suggesting a new countermeasure using mobile telecommunication.

Thank you for your attention

Are they any questions?